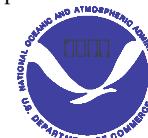




National Marine Fisheries Service, Northwest Region
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PUBLIC NOTICE

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NMFS-SEA-05-05
FOR IMMEDIATE RELEASE
July 27, 2005

PACIFIC COAST GROUND FISH FISHERY **Higher than expected catch in the bottom trawl fishery**

The National Marine Fisheries Service (NMFS) would like to alert participants in the Pacific Coast groundfish trawl fishing and processing sectors that the catch of petrale sole and canary rockfish is higher than expected in the bottom trawl fishery. If catch rates do not slow for these two species, substantial restrictions will need to be placed on the limited entry bottom trawl fishery in the late summer or early fall to keep the total mortality of these species within their acceptable biological catch and/or harvest guidelines.

Background

As of July 16, 2005, the Pacific Coast Fisheries Information Network's Quota Species Monitoring (PacFIN QSM) system is reporting the total catch of petrale sole as 2,063 mt and the total catch of canary rockfish as 6 mt. Both estimates predominately come from catch in the limited entry bottom trawl fleet by vessels fishing shoreward of the trawl Rockfish Conservation Area (RCA). The estimated amount of petrale sole caught to date represents approximately 75% of the 2005 petrale sole allowable biological catch (2,762 mt) and the estimated amount of canary rockfish caught to date is equal to the bottom trawl fleet's predicted take for the entire year.

Canary rockfish catch in other fishing sectors is predicted to be equal to or less than the amounts estimated to be taken for the year.

Recommendations

Opportunities currently exist for trawl vessels to target deepwater species, such as sablefish and thornyheads, seaward of the Trawl RCA. If trawl vessels switch target strategies and fish seaward of the RCA, it will likely decrease the amount of petrale sole and canary rockfish being caught. If catch of both species is reduced, it is more likely that the trawl season can extend into the fall/winter and that the Pacific Fishery Management Council's goal of maintaining a year-round groundfish fishery can be met. Therefore, NMFS is requesting the Pacific Coast groundfish harvesting and processing communities to voluntarily reduce targeting of petrale sole and avoid areas where canary rockfish are likely to be found.

A copy of the July 16, 2005, PacFIN QSM report is provided below. This report and others can be found at
http://www.psmfc.org/pacfin/ber_index.html

For more information contact: NMFS Northwest Region at 206-526-6140 or visit our website at <http://www.nwr.noaa.gov>, click on "Pacific Coast Groundfish;" NMFS Southwest Region at 562-980-4000; Washington Department of Fish and Wildlife at 360-249-4628; Oregon Department of Fish and Wildlife at 541-867-4741; or the California Department of Fish and Game at 707-441-5797 (Eureka), 510-581-7358 (Belmont), 562-342-7184 (Los Alamitos), 858-546-7167 (La Jolla).

Total Fleet Best Estimates* of 2005 Cumulative Shoreside Landed Catch and At-Sea* Total Removals. Catch/Discard values are in Metric-tons.

	NON-TRIBAL			Discard	WA			2005
	Wash	Ore	Calif	Estimate	Tribal	AT-SEA	Total	HG
Longspine THDS	—	75	316	43	—	—	435	2450
Shortspine THDS	10	144	214	103	4	6	482	995
TWL Sable (V&C&E&M)	35	636	358	241	—	6	1276	3505
Dover sole	357	2521	1361	406	48	—	4693	7445
Petrals	435	1086	437	88	17	—	2063	2762
English Sole	134	244	150	168	47	—	744	3100
Arrowtooth Flounder	438	727	36	1524	26	2	2754	5800
Remaining Flatfish	58	303	240	163	13	3	781	4909
Tribal Sablefish	—	—	—	—	470	—	470	749
NTW Primary Sable*	315	352	100	39	—	—	807	
NTW DTL Sable*	54	71	132	13	—	—	270	
CP NTW Sabl Pri	—	—	—	—	—	—	—	
CP NTW Sabl DTL	—	—	30	1	—	—	32	
Sablefish Conception	—	—	93	7	—	—	101	275
Lingcod	15	42	22	66	12	3	161	274
Spiny Dogfish	401	3	7	—	3	300	714	
Widow Rockfish	8	15	9	25	18	76	152	282
Darkblotched RCKFSH	1	40	14	24	—	11	91	91
Canary rockfish	2	2	—	2	1	1	8	23
POP (V&C&E)	5	29	—	12	1	2	49	129
Yellowtail (V&C&E)	50	52	—	—	312	102	516	3871
Cabazon (V&C&E)	—	18	1	—	—	—	19	
(V&C&E) UNSP RCKFSH	—	—	1	—	—	—	1	1612
Yelloweye (V&C&E&M)	—	—	—	0	—	—	—	9
Black Rockfish, Nor.	—	67	19	—	—	—	86	540
Kelp Greenling, Nor.	—	15	—	—	—	—	15	
Near-shore RF, Nor.	—	8	12	—	—	—	20	54
Shelf rockfish, Nor.	4	2	16	—	5	6	33	958
Slope rockfish, Nor.	32	61	6	—	16	23	138	1160
TWL Bocaccio (MT&CP)	—	—	2	2	—	—	4	
NTW Bocaccio (MT&CP)	—	—	2	—	—	—	2	
Chilipepper (MT&CP)	—	—	8	—	—	—	8	1973
Splitnose RF (MT&CP)	—	—	34	—	—	—	34	461
Cabazon (MT&CP)	—	—	14	—	—	—	14	69
(MT&CP) UNSP RCKFSH	—	—	—	—	—	—	—	854
Black Rockfish, So.	—	—	2	—	—	—	2	753
Kelp Greenling, So.	—	—	2	—	—	—	2	
CA Scorpionfish, So.	—	—	1	—	—	—	1	
N-S RF: Shallow, So.	—	—	18	—	—	—	18	
N-S RF: Deep, So.	—	—	16	—	—	—	16	
Shelf rockfish, So.	—	—	12	—	—	—	12	654
Slope rockfish, So.	—	—	79	—	—	—	79	639
Pacific Whiting	15395	30586	3350	1701	1927	98201	151160	269069
*Estimates Thru	16JUL	16JUL	16JUL		16JUL			
HARD DATA THRU	MAY05	JUN05	APR05		MAY05	JUL05		

Hard data for this report was extracted from the PacFIN database on 19-JUL-2005.

HG = Target Fishing Mortality Guideline

The HGs are commercial (LE and OA) guidelines only, the anticipated recreational catches are not included on this report.

* The at-sea catch statistics are estimates of total removals including discards.

* The nontrawl (NTW) sablefish catch displayed on the Total Fleet report includes catches for both the limited entry and open access fisheries.

* The values for NTW Primary Sable and NTW DTL Sable are limited to the V&C&E&M area.

* The 2005 Harvest Guideline for Bocaccio MT&CP (all gears) = 85 mtons.

- * The 2005 Harvest Guideline for Near-Shore Rockfish South = 97 mtons.
- * The HG for Pacific Whiting is the total U.S. coastwide allocation.

V&C&E = U.S. Vancouver & Columbia & Eureka INPFC areas combined.
V&C&E&M = U.S. Vancouver & Columbia & Eureka & Monterey INPFC areas combined.
MT&CP = Monterey and Conception INPFC areas combined.
CP = Conception area.
So. = Monterey and Conception INPFC areas combined.
Nor. = Vancouver & Columbia & Eureka INPFC areas combined.

GROUNDFISH MANAGEMENT TEAM REPORT ON STATUS OF 2005 GROUNDFISH FISHERIES AND CONSIDERATION OF INSEASON ADJUSTMENTS

The Groundfish Management Team (GMT) reviewed several inseason management issues including the higher than anticipated catch of canary rockfish and petrale sole, the widow bycatch limit in the whiting fishery, and consistency between state and federal recreational regulations. The discussions and recommendations for Council consideration are outlined below.

COMMERCIAL LIMITED ENTRY TRAWL FISHERIES

Petrale sole and canary rockfish

A review of PacFIN Quota Species Monitoring (QSM) data shows that the catch of petrale sole is quickly approaching the optimum yield (OY)/acceptable biological catch (ABC). As of September 16, 2005, QSM data indicate that total non-tribal petrale sole catch is 2,552 mt out of a 2,762 OY/ABC. Based on this information, a winter petrale sole fishery cannot be accommodated. Additionally, the catch of canary rockfish in the limited entry bottom trawl fishery has exceeded the 8.0 mt bycatch scorecard's placeholder for the year. To address both of these issues, the GMT analyzed three options for inseason action, which are described in the table below.

Option	Date of Action	Trawl RCA Configuration *	Cumulative Limits
Option A (Achieves conservation objectives)	Oct 1 to the end of the year	250 fm to the shoreline coastwide	Adjust Cumulative Limits
Option B (Does not achieve conservation objectives)	Oct 1 to Nov 1	250 fm to 75 fm coastwide	Adjust Cumulative Limits
	Nov 1 to the end of the year	250 fm to the shoreline coastwide	Adjust Cumulative Limits
Option C – GMT preferred alternative (Achieves conservation objectives)	October 1 to the end of the year	250 fm to the shoreline north of 36° N latitude	Adjust Cumulative Limits
		250 fm to 50 fm south of 36° N latitude	

*Note: The proposed 250 fm RCA boundary is not modified to include petrale areas.

Based on the amount of canary rockfish remaining in the scorecard and the amount of petrale sole caught to date, the GMT does not believe that Option B can be accommodated. Although the GMT believes Options A and C both achieve conservation objectives, Option C allows for increased opportunities in areas south of 36° N latitude, where canary rockfish and petrale sole encounters are minimal, and therefore is the GMT's preferred option for Council consideration.

DTS limits

Cumulative trip limits are also recommended to keep Dover sole catch levels within the OY, and calculations of DTS catch levels within the OY, and calculation of DTS catch ratios results in trip limit adjustments in the following table under Option C. A small petrale sole limit which accommodates incidental catch in the DTS fishery is provided to minimize discard.

Option C - Adjustments to trawl RCA and Trawl Cumulative Limits

			RCA BOUNDARIES		BIMONTHLY LIMITS								SLOPERCK& SPLNOSE	
SUBAREA	PERIOD		INLINE	OUTLINE	SABLEFISH	LONGSPINE	SHORTSPINE	DOVER	O'FLAT	PETRALE	ARROWT'RH			
N 40 10	1		75	150	9,500	15,000		3,500	69,000	110,000	No Limit	No Limit	4,000	
	2		100	200	9,500	15,000		3,500	69,000	110,000	42,000	150,000	4,000	
	3		100	200	17,000	23,000		4,900	30,000	110,000	40,000	150,000	4,000	
	4		100	200	18,000	23,000		5,200	30,000	110,000	40,000	150,000	4,000	
	5		*100	*200	18,000	23,000		5,200	35,000	110,000	40,000	150,000	4,000	
	6		0	250	11,000	7,000		3,500	20,000	30,000	2,000	50,000	4,000	
North Shoreward Limit	1		75	150	1,500	1,000		1,000	20,000	100,000	25,000	70,000		
	2		100	200	10,000	1,000		1,000	35,000	100,000	35,000	70,000		
	3		100	200	10,000	1,000		3,000	35,000	90,000	35,000	70,000		
	4		100	200	15,000	8,000		4,000	35,000	90,000	35,000	70,000		
	5		*100	*200	15,000	8,000		4,000	35,000	90,000	35,000	70,000		
	6		0	250	0	0		0	0	0	0	0		
38-40 10	1		75	150	14,000	19,000		4,200	50,000	110,000	No Limit	No Limit	4,000	
	2		100	200	14,000	19,000		4,200	50,000	110,000	42,000	10,000	4,000	
	3		100	150	14,000	19,000		4,200	40,000	110,000	42,000	10,000	8,000	
	4		100	150	16,000	19,000		4,600	40,000	110,000	42,000	10,000	20,000	
	5		*100	*150	16,000	19,000		4,600	40,000	110,000	42,000	10,000	8,000	
	6		0	250	9,000	11,000		3,500	30,000	30,000	2,000	10,000	6,000	
38-36	1		75	150	14,000	19,000		4,200	50,000	110,000	No Limit	No Limit	40,000	
	2		100	150	14,000	19,000		4,200	50,000	110,000	42,000	10,000	40,000	
	3		100	150	14,000	19,000		4,200	40,000	110,000	42,000	10,000	40,000	
	4		100	150	16,000	19,000		4,600	40,000	110,000	42,000	10,000	40,000	
	5		*100	*150	16,000	19,000		4,600	40,000	110,000	42,000	10,000	40,000	
	6		0	250	9,000	11,000		3,500	30,000	40,000	2,000	5,000	40,000	
S 36	1		75	150	14,000	19,000		4,200	50,000	110,000	No Limit	No Limit	40,000	
	2		100	150	14,000	19,000		4,200	50,000	110,000	42,000	10,000	40,000	
	3		100	150	14,000	19,000		4,200	40,000	110,000	42,000	10,000	40,000	
	4		100	150	16,000	19,000		4,600	40,000	110,000	42,000	10,000	40,000	
	5		*100	*150	16,000	19,000		4,600	40,000	110,000	42,000	10,000	40,000	
	6		50	250	9,000	11,000		3,500	30,000	40,000	2,000	5,000	40,000	

* note: RCA boundaries change to 0-250 on Oct 1 north of 36

RCA boundaries change to 50-250 on Oct 1 south of 36

bold text represents changes

Proposal C - Estimated Mortality after Inseason Adjustment

		North	South	Total
Rebuilding species	Lingcod	129.6	31.2	160.8
	Canary	8.0	1.5	9.5
	POP	64.7	0.0	64.7
	Darkbltch	107.8	28.1	136.0
	Widow	4.9	0.1	5.0
	Bocaccio	0.0	50.0	50.0
	Yelloweye	0.2	0.1	0.3
	Cowcod	0.0	0.9	0.9
Target species	Sablefish	1,837.4	591.9	2,429.3
	Longspine	257.5	438.9	696.4
	Shortspine	464.5	258.3	722.8
	Dover	5,883.2	1,547.8	7,431.0
	Arrowt'th	4,494.5	28.1	4,522.5
	Petrals	2,415.0	332.0	2,748.0
	Othr Flat	848.9	572.2	1,421.1
	Slope Rock	227.2	242.4	469.6

California halibut:

The GMT examined fish ticket data from the 2004 CA halibut fishery in the Monterey International North Pacific Fishery Commission area to evaluate the co-occurrence of petrale sole with CA halibut. A total of 150 pounds of petrale were caught in association with the CA halibut fishery from October through December. Therefore, the GMT believes that the fishery can be prosecuted without contributing to a petrale resource concern.

Widow rockfish bycatch in the whiting fishery:

The GMT received a request to consider increasing the widow rockfish bycatch limit in the whiting fishery. As of the September 12, the non-tribal sector had taken 149.6 mt of the 200 mt widow bycatch limit. As some level of widow catch in the whiting fishery is unavoidable, there are concerns that the fishery will operate in a derby fashion to harvest as much whiting as possible before the widow bycatch limit is reached. This could result in not attaining the 2005 whiting OY. The amount of widow rockfish reserve in the bycatch scorecard is 26.8 mt. Therefore, there may be widow available if the Council chooses to increase the bycatch limit in the whiting fishery. The GMT recommends not allocating the entire reserve to the whiting fishery due to uncertainty in impact projections.

As of September 16, the total non-tribal catch of lingcod is 235 mt. The 2005 commercial harvest guideline for lingcod is 274.2 mt and the GMT anticipates that this commercial harvest guideline will be exceeded before the end of the year. The GMT does not expect that the lingcod OYs (1,801 mt and 612 mt) or the ABC (2,922 mt) will be exceeded. Therefore, the GMT recommends that the Council allow the lingcod harvest guideline to be exceeded so to not unnecessarily constrain the commercial fishery.

COMMERCIAL FIXED GEAR FISHERIES

Based on PacFIN QSM data through September 12, the sablefish daily trip limit (DTL) sector has attained less than half of their allocation for the year. As a result, the GMT analyzed an increase to DTL daily, weekly, and bimonthly limits, and discussed an increase in DTL fishery limits with the Groundfish Advisory Subpanel (GAP). As part of our analysis, the GMT

considered likely increases in effort and limit attainment from vessels engaged in the DTL fishery. Based on analysis of this sector and input from the GAP, the GMT is forwarding the option shown below for Council consideration. The GMT does not anticipate this option will result in increased levels of bycatch beyond what is already in the scorecard since those estimates were based on the assumption that each sector would achieve their allocation.

DTL Inseason Adjustment Proposal for October - December

<u>Time Period</u>		<u>Limit</u>
Daily	–	500 lbs
Weekly	–	1,500 lbs
Bimonthly	–	9,000 lbs

OTHER ISSUES

The GMT reviewed 2005 commercial and recreational harvest of minor nearshore rockfish for the area north of 40° 10' N latitude. Given the current level of landings it is possible that the northern minor nearshore rockfish OY may be exceeded, although this is unlikely to occur prior to the November Council meeting. If the OY is met or exceeded in 2005, the GMT does not consider this to be a resource issue for the following reasons:

1. The minor rockfish north OY is divided into three sub-OYs for nearshore, shelf, and slope rockfish. Harvest of both shelf and slope rockfish has been relatively low given current management constraints; and
2. The difference between the minor rockfish north ABC (3,680 mt) and OY (2,250 mt) is quite large.

The GMT will continue to monitor the harvest of the northern minor nearshore rockfish and will provide the Council with an update in November.

WASHINGTON RECREATIONAL FISHERIES

The Washington recreational fishery is managed under a joint harvest guideline with the Oregon recreational fishery for canary and yelloweye rockfish. As stated in the 2005-06 specifications Environmental Impact Statement (EIS), the Washington Department of Fish and Wildlife (WDFW) committed to take management action to close portions of its recreational fisheries seaward of a line approximating 30 fm as an inseason measure, if the harvest guideline for canary and/or yelloweye were projected to be exceeded.

At the end of July, after receiving the recreational catch data through June, WDFW's revised catch projections for the year indicated that 1.8 mt of canary rockfish would be harvested (as compared to a state harvest target of 1.7 mt, and a shared harvest guideline of 8.5 mt). At that time, the revised catch projection for yelloweye rockfish was still on target. In response, effective August 5, 2005, WDFW adopted an emergency regulation to close its recreational bottomfish and halibut fisheries seaward of a line approximating 30 fm from the U.S./Canada border to Leadbetter Pt., Washington (Washington Marine Catch Areas 2, 3, and 4). The action

did not apply to the area between Leadbetter Pt. and the Columbia River as the canary and yelloweye catches in this area are extremely low.

At the end of August, after receiving the recreational catch data through July, WDFW's revised catch projections for the year indicated that 1.8 mt of canary rockfish was still expected to be harvested. However, the revised catch projection for yelloweye rockfish is 4.2 mt (out of a 3.5 mt state harvest target, and a shared harvest guideline of 6.7 mt). It is expected that, with the fishery closed seaward of 30 fm, the additional yelloweye rockfish harvest will be near-zero through the end of the year.

Washington recreational fisheries for bottomfish typically decline in September and halibut fisheries close at the end of September. Therefore, restricting the Washington recreational fishery after September will have little to no effect. The GMT recommends that the National Marine Fisheries Service adopt federal regulations which conform to the state regulations for Washington recreational bottomfish fisheries.

OREGON RECREATIONAL FISHERIES

Due to poor recreational ocean salmon catches off Oregon in 2005, there was a notable effort shift from targeted salmon trips to targeted groundfish trips. Combined with increased catch rates of groundfish species, most notably black rockfish, blue rockfish, and yelloweye rockfish, early attainment of harvest guidelines were eminent if action was not taken. The Oregon Department of Fish and Wildlife (ODFW) took action to reduce the marine fish daily bag limit from eight to five, effective July 16, 2005 in an effort to ensure the recreational groundfish fishery could continue through the end of the year.

The Oregon Department of Fish and Wildlife also prohibited retention of cabezon in the ocean boat fishery beginning August 11, 2005. Landing data indicated that the state imposed ocean boat harvest cap of 15.8 mt had been met. Due to action taken by the Oregon Fish and Wildlife Commission in 2004, the state is unable to close shore-based groundfish fisheries, though the state may still impose bag limit and length restrictions. Therefore, the cabezon prohibition applies to the ocean boat fishery only.

To reduce impacts on yelloweye rockfish and canary rockfish, the ODFW closed waters seaward of 40 fm to groundfish retention from June 1 – September 30. Vessels fishing the high relief areas of Stonewall Banks, a popular Pacific halibut fishing area west of Newport, Oregon with historically high catches of yelloweye rockfish and canary rockfish, were only permitted to troll on all-depth Pacific halibut days if they had Pacific halibut on the vessel. Additionally, anglers were restricted from retaining Pacific halibut caught in this closed area. A conference call with WDFW was held in July to discuss both canary rockfish and yelloweye rockfish catches. There appeared, at that time, to be a sufficient Washington/Oregon recreation value in the bycatch scorecard for yelloweye rockfish. The occurrence of yelloweye rockfish in the nearshore groundfish fishery increased substantially in July 2005 compared with previous months and this increase was not captured in earlier projections. This increase was not identified until the end of August, due to the time-lag required for estimating recreational catch. The 2005-2006 specifications EIS specified that ODFW may take action to implement a 30 fm or 20 fm management line if the yelloweye or canary rockfish harvest guidelines were projected to be exceeded. However, further analysis by ODFW reflected that there would be little additional

savings in yelloweye impacts by implementing a 30 fm line, because very little fishing occurs between 30 fm and 40 fm off the Oregon coast. In addition, the time needed to develop and implement a 20 fm management line would not allow for savings in the projected catch. Angler effort, and therefore groundfish harvest, typically declines in early September. With the current 40 fm line in place, an updated yelloweye rockfish catch estimate of 8.5 mt for Oregon and Washington combined is projected.

CALIFORNIA RECREATIONAL FISHERIES

California provided the GMT with their current projections of total recreational take for 2005 based upon California Recreational Fisheries Survey estimates for the period January – July 2005 and catch model projections for August - December. These results indicate that the take of groundfish species of concern in California is not expected to exceed harvest targets. However, catches of black rockfish and minor nearshore rockfish, both north and south of 40° 10'N Lat., are tracking higher than expected. Over the next month, California plans to thoroughly review the July CRFS estimates, the trends in catch of deeper nearshore rockfish, and, if available, the preliminary August CRFS estimates to determine what inseason actions, if any, will need to be considered at the November Council meeting.

The GMT will provide an updated bycatch scorecard and trip limit tables on Wednesday under agenda item F.5.

GMT RECOMMENDATIONS:

1. For October – December, expand the trawl RCA to extend between 250 fm (not modified to include petrale areas) and the shoreline north of 36° N latitude and expand the trawl RCA to extend between 250 fm (not modified to include petrale sole areas) and 50 fm south of 36° N latitude.
2. Adjust limited entry trawl trip limits as outlined in the Option C table.
3. Consider an increase to the widow bycatch limit in the whiting fishery.
4. Allow the lingcod harvest guideline to be exceeded so as to not unnecessarily constrain the commercial fishery.
5. Increase limited entry fixed gear and open access sablefish daily trip limits to 500 lb/day, 1,500 lb/week, 9,000 lb/2 months for October – December.
6. Adopt conforming Federal regulations for recreational regulation changes in Washington and Oregon.

PFMC
09/20/05

STATUS OF 2005 GROUND FISH FISHERIES AND CONSIDERATION OF INSEASON
ADJUSTMENTS

The Groundfish Advisory Subpanel reviewed the Groundfish Management Team report and concurs with all recommendations.

PPMC
09/20/05



Pacific Whiting Conservation Cooperative

Alaska Ocean Seafoods • American Seafoods • Glacier Fish Co. • Trident Seafoods

A Partnership to Promote Responsible Fishing

Dr. Steve Freese, Acting Assistant Regional Administrator
National Marine Fisheries Service
7600 Sand Point Way NE, BIN C15700
Seattle, WA 98115-0070

Dr. Freese,

Please accept these comments on behalf of the Pacific Whiting Conservation Cooperative (PWCC). The PWCC is comprised of the four companies that operate fishing vessels in the Catcher-Processor (CP) sector of the Pacific whiting fishery. The PWCC was formed in 1997 to promote efficient utilization of the whiting resource and to minimize bycatch in the whiting fishery. The PWCC also sponsors research to facilitate improved understanding of Pacific coast groundfish population dynamics. These comments are in response to your July 18, 2005 letter to whiting industry participants.

Your letter highlights National Marine Fisheries Service (NOAA Fisheries) concerns about salmon bycatch in the 2005 whiting fishery. Specifically, bycatch rates of Chinook salmon in the whiting fishery are higher than normal and it is likely the annual bycatch limit of 11,000 Chinook salmon will be exceeded. You encourage whiting industry participants to take immediate action to voluntarily reduce bycatch to the maximum extent possible. During 2005, PWCC vessels have fished exclusively outside 100 fathoms to minimize our bycatch of salmon. For the season, our salmon bycatch rates are well below the acceptable level of 0.05 Chinook salmon/metric ton of whiting specified in the 1999 Biological Opinion. In response to your request, we are prepared to move out to 150 fathoms for the remainder of the 2005 fishery to ensure that our salmon bycatch rate stays below 0.05 salmon/mt.

We recognize that fishing outside of 100 fathoms might not be practical for other sectors of the whiting fishery. Moreover, treaty Indian tribal fisheries are constrained to fishing within their usual and accustomed (U&A) areas.

However, the PWCC is deeply concerned that if immediate measures are not taken to reduce salmon bycatch rates NOAA Fisheries will be forced to take Draconian measures that could severely impact the CP sector of the whiting fishery. If NOAA Fisheries were to close the directed whiting fishery when the annual bycatch limit of 11,000 Chinook is exceeded, the CP sector stands to forego 30-40,000 mt of Pacific whiting, an economic loss of tens of millions of dollars. Therefore, we request guidance from NOAA Fisheries about specific remedial measures available to address salmon bycatch in the whiting fishery. Given the significant potential economic loss to PWCC companies, we request NOAA Fisheries seriously consider more surgical measures to address specific problems rather than a blunt closure of the whole directed fishery. For example, we request NOAA Fisheries consider emergency action to allow Tribal fisheries to operate outside of Tribal U&As (i.e., in waters deeper than 100 fathoms) for the remainder of the 2005 fishery.

Thank you for considering these suggestions. The PWCC stands ready to do what is necessary to ensure salmon bycatch rates stay below 0.05 salmon/mt in our sector of the fishery. If NOAA Fisheries determines that inseason actions are needed to curtail salmon bycatch, we urge you to employ precise remedial measures to address specific problems. Generic measures, such as closure of the directed fishery, would result in unnecessary and severe economic harm.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel A. Waldeck", with a stylized flourish at the end.

Daniel A. Waldeck
Executive Director

Subject: [Fwd: Pineapple Trawls]
From: "PFMC Comments" <pfmc.comments@noaa.gov>
Date: Wed, 20 Jul 2005 09:01:14 -0700
To: John DeVore <John.DeVore@noaa.gov>
X-Mozilla-Status: 0001
X-Mozilla-Status2: 00000000
Return-Path: <pfmc.comments@noaa.gov>
Received: from [10.0.0.108] ([65.106.153.163]) by mercury.akctr.noaa.gov (Netscape Messaging Server 4.15 mercury Jun 21 2001 23:53:48) with ESMTP id IJXOI200.CAS for <John.DeVore@noaa.gov>; Wed, 20 Jul 2005 09:01:14 -0700
Message-ID: <42DE754A.1020508@noaa.gov>
Reply-To: fwtrawl@newportnet.com
Organization: Pacific Fishery Management Council
User-Agent: Mozilla Thunderbird 1.0 (Windows/20041206)
X-Accept-Language: en-us, en
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary="-----090502050505050208010800"

----- Original Message -----

Subject: Pineapple Trawls
Date: Wed, 20 Jul 2005 08:50:22 -0700
From: Sara Skamser <fwtrawl@newportnet.com>
To: <pfmc.comments@noaa.gov>

Hello to the council,

My name is Sara Skamser. My husband John and myself own Foulweather Trawl in Newport, Oregon. We have been involved in the development and construction of the selective flatfish trawl (pineapple) from the beginning and we would like to update you on some of our reports from fishermen.

This season we have built 18 new pineapple trawls and cut back another 4 existing 2 seam trawls (which seem to work very well). In previous years we had sold 6 new Pineapples. Sizes range (footrope length) from 58' to 100', with the 80' version being the most popular.

We have asked the fishermen to call and give a report on the performance of their cut back nets.

We got comments across the board that were very similar. "That net fishes real good. And CLEAN!" "We are afraid to tow more than an hour" "We have to shut down to get the fish in the hold" "I am saving 3 gallons an hour in fuel" "That net is fun to fish because it is so easy to handle" "I wish I had one of these years ago" "Its the weirdest net I've ever seen, but it really catches"

Most of our sales were Newport and south. One Astoria boat got one. The Newport fleet also went a step farther and have started using 5 1/4" BK (between the knots) codend web instead of the legal limit mesh of 4 1/2" BK. They are not retaining as many small fish and are not losing any marketable fish. They also feel as though the net fishes better longer because it is not filling up with junk. We also hear that there is a lot of fish out there.

All in all, the guys are real happy with the nets. Extremely happy. The boats farther south seem to have better luck fishing the net in deeper water. Some performance differences we are seeing is just the difference of areas being fished. Everyone is seeing good performance on the beach. We have to believe they are honestly astonished on how clean they are fishing with the comments we keep getting.

This has obviously been wonderful for us and exciting in its own little beach dragger way. Our Pineapple theme song is "Day Tripper" (one way ticket, man. It took me sooooo long to find out....)

Thank you for your time,
Sara Skamser

Pacific Fishery Management Council

Subject: [Fwd: FW: Re: Request to Rescind Fish Closures for Boccaccio]
From: "Mike Burner" <Mike.Burner@noaa.gov>
Date: Fri, 01 Jul 2005 09:26:28 -0700
To: John DeVore <John.DeVore@noaa.gov>
X-Mozilla-Status: 0001
X-Mozilla-Status2: 00000000
>From - Tue Jul 05 08: 53:13 2005
X-Mozilla-Status: 0001
X-Mozilla-Status2: 00000000
Return-Path: <mike.burner@noaa.gov>
Received: from [10.0.0.110] ([65.106.153.163]) by mercury.akctr.noaa.gov (Netscape Messaging Server 4.15 mercury Jun 21 2001 23:53:48) with ESMTP id IYJ0G00.7OP for <John.DeVore@noaa.gov>; Fri, 1 Jul 2005 09:26:40 -0700
Message-ID: <42C56EB4.5010907@noaa.gov>
X-Mozilla-Status: 0200
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 5.0; en-US; rv:1.7.2) Gecko/20040804 Netscape/7.2 (ax)
X-Accept-Language: en-us, en
MIME-Version: 1.0
Content-Type: multipart/alternative; boundary="-----040003050901070802070203"

fyi

----- Original Message -----

Subject:FW: Re: Request to Rescind Fish Closures for Boccaccio
Date:Thu, 30 Jun 2005 10:25:34 -0700
From:Hoover Ng <hooverng@hotmail.com>
To:Mike.Burner@noaa.gov

>From: "FGC" <FGC@dfg.ca.gov>
>To: <hooverng@hotmail.com>
>CC:
><Assemblymember.Ron.Calderon@assembly.ca.gov>, <governor@governor.ca.gov>, <Senator.Romero@sen.ca.gov>
>Subject: Re: Request to Rescind Fish Closures for Boccaccio
>Date: Thu, 30 Jun 2005 09:59:38 -0700
>
>Dear Mr. Ng,
>
>These closures were set by the Pacific Fishery Management Council
>(PFMC). The California Fish and Game Commission had to amend its
>regulations to conform with those of the PFMC.
>
>You should contact the PFMC with your request. See the PFMC's web site
>at <http://www.pcouncil.org/>
>
>Sherrie Koell
>California Fish and Game Commission
>
> >> "Hoover Ng" <hooverng@hotmail.com> 06/29/05 3:52 PM >>>
>Dept of Fish and Game currently has severe restrictions for boccaccio,
>a
>type of rock fish. Each angler is limited to one per day.
>
>I went fishing yesterday, June 28, 2005, on the "Gentlemen", a 3/4 day
>boat
>out of Channel Island Sportfishing in Oxnard, California. I could not
>
>believe the number of boccaccio and the size of each that were caught.
>Even
>though we all limited out at one each, and kept moving to different
>spots,
>we still kept catching them. It was a shame to return them to the
>water
>because most of them were dead already!!! As you know, these rock fish
>die
>when they come up to the surface and cannot be returned alive to the
>water.
>
>I have a busy schedule and when I am able to go fishing, which is not
>that
>often, I'd like to be able to keep the fish I catch unless there is a
>real

>threat to certain species. It would have been a much better experience
>to
>have been able to keep these so called "overfished" boccaccio or salmon
>
>groupers.
>
>Please rescind the fish closure for boccaccio.
>
>To Governor Schwarzenegger, State Senator Romero and State
>Assemblymember
>Calderon, could you talk to the Department of Fish and Game Commission
>to
>rescind this fish closure? If they won't listen, can you sponsor
>legislation to rescind the fish closures for boccaccio in Southern
>California?
>
>Hoover Ng
>1929 Deerpeak Drive
>Hacienda Heights, CA 91745
>
>

--

Mike Burner
Staff Officer
Pacific Fishery Management Council
Phone: (503) 820-2280
Toll Free: (866) 806-7204
Fax: (503) 820-2299

July 15-05

DEAR Council,

When I STARTED Rock fishing IN 1975
out of Coos Bay the Rock Limit WAS
Twenty Five. THE LIMIT HAS BEEN Reduced
Every since, BUT the Council Needs
TO NOT OPEN the SEASON ON Rocks TIL
MAY 1st and Close it IN Sept.
Everyone TRYS to fish when Ling Cod
ARE Close IN, AROUND SPAWNING TIME, ONE
REASON FOR CHANGE IN Time to fish Rock.

PLEASE MAKE a SHORTEN SEASON, THAT WAY
we CAN HOPE to CATCH Eight Fish NEXT
YEAR, THANK you SO Much

Terry Jensen
450 Merrill St.
Coos Bay OR
97420

RECEIVED

JUL 18 2005

PFMC

Agenda Item F.1.1
Public Comment 2
September 2005

September 16, 2005

Mr. Donald K. Hansen
Chairman
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 200
Portland, Oregon 97220-1384

Re: Groundfish Management
Proposed October 1, 2005 Nearshore Trawl Closure

Mr. Chairman Hansen and members of the Council,

My name is Lee Ann Hightower. I am a fisherman's wife. My husband and I own and operate a 53' trawler and we live in Washington State. My husband fishes in the ocean off of northern Washington. I am writing this letter with my own thoughts and concerns regarding the upcoming nearshore fishery closure for October 1, 2005.

If the Council is not already aware that the small boat nearshore sector (boats 60' and under) has a Fall fishery during the months of October and November, I would like to make you aware of that. This Fall fishery is very important to us. We rely on this part of the fishery to get us through the winter months, when the weather is too rough for us to go out and fish. We have always been regulated naturally during the Winter months by the weather. We get very little if any time to fish. In essence we have a closure every year from Nov to Feb. created by Mother Nature. This Fall fishery that occurs in October and November is the majority portion of our total trawl fishery. Previously the Council had closed the nearshore fishery for November and December. That closure effected us because we lost half of the Fall fishery (November), but we could still survive because we had the fish harvest from October to get us through. When the Council decided to add October to the nearshore closure, that has created devastating effects for us. It has taken the total Fall fishery away from us and it has compounded our ability to survive or be forced out of the fishery completely.

Many smaller boats in the trawl fishery can only fish in the nearshore area... for some only 100fm or less. We do not have the ability to go out to the deeper areas to continue fishing for the rest of the season, like the larger boats do. Some of us are limited by our size to battle the Winter storms and some of our boats are not even big enough to carry the winches and extra wire that it takes to fish the deeper areas.

The nearshore closure brings up safety issues too. When the small boats have been shut down for 3 months and lost the Fall fishery, we are forced to go through the Winter with little funds. When the fishery does open up again in January we are compelled to go out and fish ... no matter what the weather is like. We have struggled through 3 months with no income and need to generate cash flow once again. We can not continually survive a 3 month closure year after year?

The Council may feel that we just need to get bigger boats, that we have the same opportunity as everyone else does to fish out in the deep. But, in reality we do not. Some of us do not have the funds needed to go out and buy a larger boat and permit. In today's age of downsizing and conservation, I don't think that bigger boats for everyone is in the trawl fishery's best interest. Bigger boats and higher fishing capacity is not the issue here... fairness is.

This is not a big boat-vs-little boat agenda. That is not what I am trying to say. I am simply trying to say that there has to be some kind of a compromise that can be made to make the management practices of the Council fair for ALL fishers. There were compromises made for the Hake and Petrale fishery, I ask that some kind of a compromise be made for the nearshore fishery as well. As it appears right now the smaller boats are not being given equal consideration when it comes to maintaining an all year fishery.

The smaller boats should have the EQUAL opportunity to fish all year also... and should not be penalized simply because they are smaller and unable to fish in deeper areas.

I would like to remind the Council that the Magnuson Stevens Act was written for all fishers... large and small. Through the Sustainable Fisheries Act - Standard 8, the Council is required to provide that fishery management plans ensure sustained participation of fishing communities and minimize adverse impacts. The small boat trawlers are still a strong part of the communities in which we live. In addition, a national standard was added on promoting the safety of human life at sea. When we are shut down for 3 months and have lost the best part of our fishery, we are forced to go back out fishing immediately when the fishery reopens. This puts many small boats at great risk during bad weather. As a fisherman's wife, for me this is the worst part of this closure.

Something has to change or many of us will be forced out of the fishery permanently. We can not survive this year after year. There should be able to be some kind of a compromise of some sort. If we could just be able to fish the month of October we would be able to have some of the Fall fishery.

I urge and request the Council to please address this problem and work out some kind of a compromise so that we can have an equitable opportunity to keep fishing and survive. Losing October is the critical factor here. Please consider letting the small boat nearshore trawlers fish in October.

Thank you for reading my letter and considering my request.

Sincerely,

A handwritten signature in cursive script that reads "Lee Ann Hightower".

Lee Ann Hightower
2260 Hastings Ave. W.
Port Townsend, WA 98368
hightowers@cablespeed.com

STATUS OF 2005 GROUND FISH FISHERIES AND CONSIDERATION
OF INSEASON ADJUSTMENTS

The Council set optimum yield (OY) levels and various management measures for the 2005 groundfish management season with the understanding these management measures will likely need to be adjusted periodically through the year with the goal of attaining, but not exceeding, the OYs. The Groundfish Management Team (GMT) and the Groundfish Advisory Subpanel (GAP) will meet on Sunday and Monday, September 19, 2005 (see Ancillary A and Ancillary B agendas) to discuss and recommend inseason adjustments to ongoing 2005 groundfish fisheries.

The July 27 public notice by National Marine Fisheries Service (NMFS) warning fishermen of a higher than expected catch of petrale sole and canary rockfish in the limited entry bottom trawl fishery is included in this agenda item (Agenda Item F.1.a, Attachment 1) for discussion and potential Council action.

Under this Agenda Item, the Council is to consider advisory body advice and public comment on the status of ongoing fisheries and recommended inseason adjustments prior to adopting final changes as necessary. The Council may provide guidance to the GMT and GAP prior to making final inseason adjustments under Agenda Item F.5 on Wednesday, September 20 or make final inseason adjustments under this agenda item. If the latter course is chosen, there will be opportunity to confirm or clarify the Council decision under Agenda Item F.5.

Council Action:

- 1. Consider information on the status of ongoing fisheries.**
- 2. Consider and adopt inseason adjustments as necessary.**

Reference Materials:

1. Agenda Item F.1.a, Attachment 1: NMFS Public Notice of Higher than Expected Catch in the Bottom Trawl Fishery.
2. Agenda Item F.1.d, Public Comment.

Agenda Order:

- a. Agenda Item Overview
- b. Report of the Groundfish Management Team
- c. Reports and Comments of Advisory Bodies
- d. Public Comment
- e. **Council Action:** Adopt Preliminary or Final Inseason Adjustments for the 2005 Groundfish Fishery

John DeVore
Susan Ashcraft

PFMC
08/19/05

NA = Not available; N/A = Not applicable

Name of Fishery	Name of FMP	Region, Science Center	Council	Is there at-sea monitoring in this fishery? Is it required or voluntary?	Description of at-sea observer program	Annual cost of observer program; source of funding	Average level of observer coverage achieved on an annual basis
At-Sea Pacific Whiting	Pacific Coast Groundfish Fishery Management Plan (FMP)	Northwest Region (NWR), Northwest Fisheries Science Center (NWFSC)	Pacific Fishery Management Council (FMC)	Required by 50 CFR 660	The Northwest Fisheries Science Center (NWFSC) is responsible for the At-sea Pacific Whiting Observer Program, which deploys observers on large, at-sea processors off the West coast	Approximately \$250K; the majority of costs (for observers) is paid by industry; remaining costs for staff and observer support paid by NMFS	100% coverage of at-sea hake fleet with two observers on each vessel; almost all hauls are sampled
Groundfish Bottom Trawl Gear Fishery	Pacific Coast Groundfish FMP	NWR, NWFSC	Pacific FMC	Required by 50 CFR 660	The West Coast Groundfish Observer Program (WCGOP), managed by the NWFSC, deploys observers coastwide on the bottom trawl fleet; program is a cooperative agreement between NMFS and the Pacific States Marine Fisheries Commission (PSMFC); observers are trained, deployed, and debriefed by NMFS and PSMFC staff; a contractor provides observers	Approximately \$4M, all Federal funding	13-16% coverage of landed catch coastwide (for more information, see http://www.nwfsc.noaa.gov/research/divisions/fram/Observer/)

Name of Fishery	Name of FMP	Region, Science Center	Council	Is there at-sea monitoring in this fishery? Is it required or voluntary?	Description of at-sea observer program	Annual cost of observer program; source of funding	Average level of observer coverage achieved on an annual basis
Groundfish Non-Trawl Gear Fishery	Pacific Coast Groundfish FMP	NWR, NWFSC	Pacific FMC	Required by 50 CFR 660	The WCGOP, managed by the NWFSC, deploys observers coastwide on the limited entry groundfish non-trawl fleet (both sablefish and non-sablefish endorsed); program is a cooperative agreement between NMFS and the PSMFC; observers are trained, deployed, and debriefed by NMFS and PSMFC staff; a contractor provides observers	Approximately \$4M, all Federal funding	Average of 6-38% coverage of landed primary sablefish catch coastwide (for more information, see http://www.nwfsc.noaa.gov/research/divisions/fram/Observer/); analysis of non-sablefish portion of fleet will be conducted Winter 2005
Pacific Halibut Loinline, Non-Tribal Fishery	Pacific Coast Groundfish FMP	NWR, NWFSC	Pacific FMC	No	N/A	N/A	N/A
Salmon Troll, Non-Tribal Fishery	Salmon FMP	NWR, NWFSC	Pacific FMC	No	N/A	N/A	N/A
Shoreside Pacific Whiting Fishery	Pacific Coast Groundfish FMP	NWR, NWFSC	Pacific FMC	No required monitoring as the fishery is conducted under a full-retention exempted fishery permit; however, through a pilot project, an electronic monitoring system (EMS) has been deployed on the fleet to monitor full retention	N/A	The EMS costs approximately \$225K, all Federal funding	The pilot projects has placed EMS on 100% of participating vessels

With what precision can the below takes and catches be estimated?									
Name of Fishery	Sampling protocol for observer coverage	Other at-sea observation technologies used to complement the observer program	Methods to identify or decrease potential sources of bias	Methods used to collect effort and landings data	Model(s) used to combine observer data with other data to obtain estimates of total catch or bycatch	Non-observer methods used to estimate bycatch	Takes of protected species	Total catch of target and non-target species by species group	Discards of target and non-target species by species group
At-Sea Pacific Whiting	All vessels are required to carry two observers; observers sub-sample every haul brought aboard; a small number of hauls may be missed due to illness or injury	All vessels are equipped with flow scales that accurately weigh fish electronically; observers confirm proper functioning of scales every 24 hours	Random sampling and observer diligence used to minimize presorting biases	Total effort collected from vessel logbooks; total vessel catch is verified with observer data	NA	None	NA	NA	NA
Groundfish Bottom Trawl Gear Fishery	Trawl vessel permits, which are classified according to principal ports based on the previous year's landings, are selected from a randomized list within each port for a two-month coverage period; observers sample discards of all hauls once aboard; discard can be a complete census or subsample based on volume of discard, number of species, and available time or deck space	None	Initial analysis has been conducted to determine bias related to collection methods; analysis has not identified any systematic changes in behavior when observers are onboard	Effort data are collected through vessel logbooks and fish tickets	Observer data are input into a bycatch model that is used in the management process to make trip-limit and closure decisions	Land-based port samplers sample retained catch	NA	NA	NA

Name of Fishery	Other at-sea observation		Model(s) used to combine observer data with other data to obtain estimates of total catch or bycatch			Non-observer methods used to estimate bycatch	Takes of protected species	Total catch of target species or by species or species group	Discards of target species or by species or species group
	Sampling protocol for observer coverage	Technologies used to complement the observer program	Methods to identify or decrease potential sources of bias	Methods used to collect effort and landings data	Observer data are input into a bycatch model that is used in the management process to make trip-limit and closure decisions				
Groundfish Non-Trawl Gear Fishery	For the selection of sablefish-endorsement vessels, the WCGOP selects permits for coverage from a randomized list within each port for the entire sablefish season (permits are placed in ports based on where the majority of their catch was landed the previous year), and observers take a random sub-sample of the catch of all hauls; selection of non-sablefish-endorsement vessels is the same as sablefish-endorsement vessels, except that the permits are selected for a two-month limit period for coverage	None	The WCGOP will analyze observer data in 2005 to determine whether bias exists	Fish tickets	Observer data are input into a bycatch model that is used in the management process to make trip-limit and closure decisions	None	NA	NA	NA
Pacific Halibut Longline, Non-Tribal Fishery	N/A	None	N/A	Logbooks	None	None	NA	NA	NA
Salmon Troll, Non-Tribal Fishery	N/A	None	N/A	Landings data	None	None	NA	NA	NA
Shoreside Pacific Whiting Fishery	N/A	The EMS collects global positioning system, hydraulic pressure, winch rotation, and video data to confirm full retention of catch	N/A	None; EMS data are not used in total catch estimates or effort calculations	None	EMS pilot project	NA	NA	NA

FEDERAL REGISTER NOTICES

**Groundfish and Halibut Notices
June 20, 2005 through September 7, 2005**

**Documents available at NMFS Sustainable Fisheries Groundfish Web Site
<http://www.nwr.noaa.gov/1sustfsh/gdfsh01.htm>**

70 FR 36240. Magnuson-Stevens Act Provisions; National Standard Guidelines. Action: Proposed rule; request for comments - 6/22/05

70 FR 36533. Pacific Halibut Fisheries; Oregon Sport Fisheries. Action: inseason adjustment to Oregon Yelloweye Rockfish Conservation Area. NMFS announces changes to the regulations for the Area 2A Sport Halibut Fisheries off the central coast of Oregon - 6/24/05

70 FR 38596. NMFS announces inseason adjustments to management measures in the commercial Pacific Coast Groundfish fishery - 7/5/05

70 FR 40225. Magnuson-Stevens Act Provisions; Fishing Capacity Reduction Program; Pacific Coast Groundfish Fishery; California, Washington, and Oregon, for Coastal Dungeness Crab and Pink Shrimp; Industry Fee System for Fishing Capacity Reduction Loan - 7/13/05

70 FR 45695. Magnuson-Stevens Act Provisions; Fishing Capacity Reduction Program; Pacific Coast Groundfish Fishery; California, Washington, and Oregon Fisheries for Coastal Dungeness Crab and Pink Shrimp. Action: Notice of fee effective date - 8/8/05

70 FR 47777. Magnuson-Stevens Act Provisions. Action: NMFS extends the public comment period on the proposed rule containing revisions to the National Standard 1 Guidelines through October 21, 2005 - 8/15/05

70 FR 48897. Pacific Coast Groundfish Fishery; End of the Pacific Whiting Primary Season for the Shore-based sector and the resumption of trip limits. Action: Temporary rule; fishing restrictions - 8/22/05

70 FR 51682. Pacific Coast Groundfish Fishery; Pacific Whiting; Fishery Closure. Action: Emergency rule, implemented under the authority of the Pacific Coast Groundfish Fishery Management Plan, to establish a salmon conservation zone for the primary Pacific Whiting fishery - 8/31/05

Summary of Observed Groundfish Bycatch by
Groundfish Limited-Entry Vessels Targeting California Halibut

Dr. James Hastie
Fishery Resource Analysis and Monitoring Division
Northwest Fisheries Science Center
August 12, 2005

Introduction

This report summarizes the bycatch of groundfish species by limited-entry vessels on observed tows where California halibut was targeted with trawl gear. California halibut is a flatfish species which is targeted by trawl vessels off central and southern California. Although related to other flatfish species occurring on the continental shelf, California halibut is not managed as part of the Pacific Fishery Management Council's (PFMC) Groundfish Management Plan. Participation in the open-access fishery for California halibut does not require specific permits.

The West Coast Groundfish Observer Program (WCGOP) at the Northwest Fisheries Science Center began at-sea observation of vessels with limited-entry trawl permits in September, 2001. These vessels were selected for observer coverage using a stratified random sample design. Each selected vessel was observed over all trips within a 2-month period, which is the duration of most groundfish landing limits. Although the fishery for California halibut is open access, some vessels with limited-entry trawl permits participate in it. Consequently, the selection of vessels with limited entry trawl permits provides some coverage of trips where California halibut is targeted. It is not clear how these results apply to vessels targeting California halibut that do not have limited entry trawl permits.

Methods

This summary draws from all tows by limited-entry trawl vessels that were observed between September, 2001 and August, 2004. From this universe, tows where California halibut was the target recorded in the vessel's logbook were selected. Ideally, these targets would be recorded by the vessel captain prior to fishing, however it is not known to what extent they are recorded after the results of the tow are known. Due to the limited number of selected observations, the data are summarized on an annual basis with no geographic stratification. Total and retained catch amounts are summed for California halibut and for the groundfish species or species groups presented in this report.

Results

Because California halibut is, at most, an ancillary fishery for limited-entry trawlers in California, the number of observed tows meeting the selection criteria is relatively small. From September, 2001 through August, 2004, the number of tows meeting the criterion

ranged from 62 in 2002 to 168 in 2004, with an annual average of 132. Roughly 90% of the qualifying tows were associated with landings made in San Francisco area ports.

Tows meeting the qualifying criteria produced roughly 142,000 lb of landed California halibut (Table 1) across the entire period. In 2002 and 2004, a small number of these tows contained moderate amounts of rockfish. However, the bycatch of *Sebastes* species that have been declared overfished was very low. A total of 3 lb of bocaccio and 16 lb of canary rockfish were observed, with no catch of cowcod, widow, darkblotched, or yelloweye rockfish. Overall bycatch rates for lingcod were somewhat higher (averaging 28 lb per 1,000 lb of California halibut), with a total of 3,514 lb caught.

Given the similarities between California halibut and other flatfish, it is not surprising that the coincident catch of flatfish is relatively high among the selected tows. Overall, the catch of flatfish was roughly 50% of the retained California halibut for the qualifying tows. The coincident catch of flatfish was much lower in 2004 than in preceding years. Although discard of flatfish in these tows generally ranged from 30% to 40%, the rates are reasonably consistent with rates of discard for flatfish observed in depths of less than 75 fathoms throughout the area south of 40°10' N. Lat.. (for comparison, see the observer data summary at <http://www.nwfsc.noaa.gov/research/divisions/fram/observer/dataareport2005/Tables-TrawlReportJan2005.pdf>) The vast majority of other groundfish caught in these tows were skates, most of which were discarded.

Limited-entry vessels accounted for 56-71% of California halibut poundage landed from 2001-2004, averaging 63% (Table 2). The amount of observed California halibut included in the study set represents 12-14% of the California halibut landed by limited-entry vessels during these years (~8% of landings by all vessels). For 2004, the observed poundage by vessels targeting California halibut represents more than 20% of the limited-entry total and more than 14% of all California halibut landings.

Conclusions

Observational data for trawl tows targeting California halibut are only available at this time for vessels that were part of the groundfish limited-entry fleet. Although these vessels account for more than half of California halibut landings from 2001 to 2004, the sampling protocols under which vessels were selected for coverage were formulated based on landings of groundfish and not California halibut. Therefore, it is important to note that the results summarized in this report may not be representative of the fishing behavior of the entire limited-entry fleet or the open-access fleet while fishing for California halibut. Given those caveats, California halibut tows that were observed, contained only small amounts of *Sebastes* species that have been declared overfished.

Table 1.--Bycatch of groundfish in observed trawl tows targeting¹ California halibut by vessels with groundfish limited-entry permits, 2001-2004.

	2001	2002	2003	2004	Total
Number of observed tows	95	62	203	168	528
San Francisco Area	78	46	186	164	474
Monterey Area	1	2	12	4	19
Morro Bay Area	16	14	5		35
California halibut					
Total catch (lb)	27,920	12,518	49,512	73,472	163,422
Retained catch (lb)	19,756	9,339	41,982	71,068	142,146
% discarded	29%	25%	15%	3%	13%
avg. retained lb / tow	208	151	207	423	269
All groundfish					
Total catch (lb)	28,306	22,500	104,714	85,247	240,768
Retained catch (lb)	23,222	17,694	31,421	23,540	95,876
% discarded	18%	21%	70%	72%	60%
All <i>Sebastes</i> species					
Total catch (lb)	177	7,228	481	16,749	24,635
lb per 1,000 lb CA halibut	8.9	774.0	11.5	235.7	173.3
Retained catch (lb)	157	7,222	285	132	7,797
% discarded	11%	0%	41%	99%	68%
All flatfish species					
Total catch (lb)	25,118	13,196	51,480	36,870	126,664
lb per 1,000 lb CA halibut	1,271.4	1,413.0	1,226.2	518.8	891.1
Retained catch (lb)	22,748	10,161	30,133	22,196	85,238
% discarded	9%	23%	41%	40%	33%
Bocaccio					
Total catch (lb)	0	3	0	0	3
lb per 1,000 lb CA halibut	0.00	0.37	0.00	0.00	0.02
Canary rockfish					
Total catch (lb)	3	0	3	10	16
lb per 1,000 lb CA halibut	0.15	0.00	0.06	0.14	0.11
Total cowcod lb	0	0	0	0	0
Total widow rockfish lb	0	0	0	0	0
Total yelloweye rockfish lb	0	0	0	0	0
Total darkblotched rockfish lb	0	0	0	0	0
Lingcod					
Total catch (lb)	436	272	1,713	1,092	3,514
lb per 1,000 lb CA halibut	22.08	29.12	40.81	15.37	24.72
Retained catch (lb)	53	42	699	810	1,603
% discarded	88%	85%	59%	26%	54%

¹ For purposes of this summary, targeted California halibut tows were defined as those where California halibut was declared as the target of the tow.

Table 2.--Annual landings of California halibut, by fleet, 2001-2004, and comparison of limited-entry totals with the amounts observed on tows where California halibut was recorded in the vessel logbook as the target species.

	2001	2002	2003	2004	Total
Annual landed catch of CA halibut (mt) ¹					
Limited-entry vessels	109	117	112	139	477
Open-access vessels	64	90	46	77	276
percent limited entry	63%	56%	71%	64%	63%
Observed tows where CA halibut was reported as the target					
Observed CA halibut (mt)	9	4	19	32	64
percent of limited-entry total	8.2%	3.6%	17.0%	23.2%	13.5%
percent of all CA halibut	5.2%	2.0%	12.1%	15.0%	8.6%

¹ From fish ticket landings (PacFIN).

NATIONAL MARINE FISHERIES SERVICE REPORT ON GROUNDFISH MANAGEMENT

National Marine Fisheries Service (NMFS) Northwest Region will briefly report on recent regulatory developments relevant to groundfish fisheries and issues of interest to the Council. Attached for the Council's review is the Pacific Council portion of a recent nationwide standardized reporting methodology review (Agenda Item F.2.a, Attachment 1). The Council should also be aware of the proposed rule modifying National Standard 1 guidelines for ending overfishing and rebuilding overfished species. The comment period for the proposed rule for these guidelines has been extended to October 21, 2005. Copies of the proposed rule can be found at http://www.nmfs.noaa.gov/mediacenter/docs/NSG1_Proposed_Rule.pdf or are available upon request at the Council meeting. The Scientific and Statistical Committee provided comments on the draft proposed rule in October 2004, most of which appear to have been incorporated in the proposed rule.

NMFS Northwest Fisheries Science Center will also briefly report on groundfish-related science and research activities, including a new observer data report of limited entry vessels targeting California halibut (Agenda Item F.2.b, Attachment 1).

Council Task:

Discussion.

Reference Materials:

1. Agenda Item F.2.a, Attachment 1: NMFS September 2004 Summary of Region-by-Region Standardized Reporting Methodology Review.
2. Agenda Item F.2.b, Attachment 1: Summary of Observed Groundfish Bycatch by Groundfish Limited-Entry Vessels Targeting California Halibut.

Agenda Order:

- a. Regulatory Activities
- b. Science Center Activities
- c. Reports and Comments of Advisory Bodies
- d. Public Comment
- e. Council Discussion

Steve Freese
Elizabeth Clarke

PFMC
08/23/05

DRAFT

AMENDMENT 18 (BYCATCH MITIGATION PROGRAM)

AMENDMENT 19 (ESSENTIAL FISH HABITAT)

TO THE

PACIFIC COAST GROUNDFISH FISHERY MANAGEMENT PLAN

**FOR THE CALIFORNIA, OREGON, AND
WASHINGTON GROUNDFISH FISHERY**

**PACIFIC FISHERY MANAGEMENT COUNCIL
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SEPTEMBER 2005

PREFACE

This document shows proposed changes to the groundfish fishery management plan (FMP) developed by Council/National Marine Fisheries Service (NMFS) staff based on the preferred alternatives in the Bycatch Mitigation Program FEIS (Amendment 18) and the Essential Fish Habitat EIS (Amendment 19). Substantive changes address elements of the preferred alternative for each of these actions. As part of Amendment 18, the FMP has also been updated to better reflect the current management framework. Table 1 shows changes in the organization of chapters under Amendment 18. Text has been revised in chapters 1, 2, 6, 9, 10, and 11 of the current FMP under Amendment 18. Text in chapters 1, 6, and 7 (a new chapter created by Amendment 18) has been revised under Amendment 19. Because of changes in the chapter structure, chapter 8 is renumbered chapter 9 and chapter 12 is renumbered chapter 11, but no other changes are made in these chapters.

Chapter 6, Management Measures, has been substantially reorganized and revised. Material in chapter 9 (Restrictions On Other Fisheries) and chapter 11 (Management Measures That Continue In Effect With Implementation of Amendment 4) have been incorporated into chapter 6, outdated references to foreign and joint-venture fishing have been deleted, and the structure of the chapter has been modified to emphasize the range of management measures available to the Council. Management measures to mitigate the adverse effects of fishing on EFH are added to Chapter 6 through Amendment 19. Table 2 provides a guide to the disposition of sections in chapters 6 and 11 of the current FMP under the proposed revisions.

In general, for deletions are marked by ~~strikethrough~~, Amendment 18 insertions by double underline, and insertions made by amendment 19 by dotted underline. Notes, for example requesting advisory body input, are in ***[boldface italic brackets]***.

Chapter 6 and the new Chapter 7 are exceptions. Because they are comprehensively reorganized, with much text added and deleted, in most cases, using strikethrough and double underline was deemed too distracting. Instead, the following marks are used to indicate changes:

Annotations at the right-hand margin, like this:

[6.3.2 Standardized Reporting Methodology]
indicate the location in the current FMP, by section number and heading, of the text that follows.

Paragraphs based on text currently in the FMP, but substantially modified by Amendment 18, are indicated by a single rule in the left-hand margin, like this:

|

New paragraphs inserted by Amendment 18 are indicated by a double rule in the left-hand margin, like this:

||

In both Chapter 6 and the new Chapter 7 (created from Section 6.6) paragraphs substantially modified by Amendment 19 are indicated by a dotted line in the left-hand margin, like this:

·
·
·

New paragraphs inserted by Amendment 19 are indicated by a triple rule in the left-hand margin, like this::

|||

Strikethrough and double underline (or dotted underline) is used in paragraphs where there have been minor changes in the current text. (The paragraphs are annotated with the current section number and heading, as described above.) Copy edits (e.g., changes in punctuation) are not marked.

Readers interested in the substance of deleted sections in chapters 6 and 11 (as indicated in Table 2), or substantially modified text, may refer to the current FMP, using the annotations and Table 2 as guides.

Table 1. Guide to chapter-level changes.

Chapters as Revised by Amendment 18	FMP through Amendment 17 (December 2004)	Notes on Changes Made By Amendment 18
Chapter 1 Introduction	Chapter 1 Introduction	Revised and Updated
Chapter 2 Goals and Objectives	Chapter 2 Goals and Objectives	Objective added, definitions added
Chapter 3 Areas and Stocks Involved	Chapter 3 Areas and Stocks Involved	No changes
Chapter 4 Optimum Yield	Chapter 4 Optimum Yield	No changes
Chapter 5 Specification and Apportionment of Harvest Levels	Chapter 5 Specification and Apportionment of Harvest Levels	Minor edits for consistency
Chapter 6 Management Measures	Chapter 6 Management Measures	Substantially revised and reorganized
	Chapter 7 Experimental Fisheries	Renumbered Chapter 8
	Chapter 8 Scientific Research	Renumbered Chapter 9
Chapter 7 Essential Fish Habitat		Creates new chapter from material in Section 6.6 (then amended by Amendment 19)
Chapter 8 Experimental Fisheries		Renumbered and revised
Chapter 9 Scientific Research		Renumbered, no other changes
	Chapter 9 Restrictions on Other Fisheries	Deleted with material incorporated into Chapter 6
Chapter 10 Procedures for Reviewing State Regulations	Chapter 10 Procedures for Reviewing State Regulations	Background section revised
	Chapter 11 Management Measures that Continue in Effect With Implementation of Amendment 4	Deleted with material incorporated into Chapter 6
Chapter 11 Groundfish Limited Entry		Renumbered, no other changes
	Chapter 12 Groundfish Limited Entry	Renumbered Chapter 11
References	References	No changes
Appendices Contents	Appendices Contents	No changes

Table 2. Guide to Revision of Chapter 6 and 11

Current FMP	Location under revision	Notes
6.0 MANAGEMENT MEASURES	6.1 Introduction	Substantially revised to describe chapter organization
6.1 General List of Management Measures	6.1.1 Overview of Management Measures for West Coast Groundfish Fisheries	Substantially revised to describe chapter organization. Old sections 6.1.1-6.1.10 moved.
6.1.1 Permits, Licenses, and Endorsements	6.9 Measures to Control Fishing Effort, Including Permits and Licenses	Moderately revised
6.1.2 Mesh Size	6.6.1.2 Trawl Gear	Incorporated into new text
6.1.3 Landing and Frequency Limits	6.7.2 Commercial Fisheries	Text added
6.1.4 Quotas, Including Individual Transferable Quotas	6.7.1 All Fisheries	No changes to text
6.1.5 Escape Ports and Panels	6.6 Gear Definitions and Restrictions	Incorporated into new text
6.1.6 Size Limits	6.7.1 All Fisheries	No changes to text
6.1.7 Bag Limits	6.7.3 Recreational Fisheries	New text added
6.1.8 Time/Area Closures (Seasons and Closed Areas)	6.8 Time/Area Closures	Substantially revised, new text and sections added
6.1.9 Other Forms of Effort Control	6.9 Measures to Control Fishing Effort...	Moderately revised
6.1.10 Allocation	6.3 Allocation	No changes to text
6.2 General Procedures for Establishing and Adjusting Management Measures	6.2 General Procedures for Establishing and Adjusting Management Measures	Moderate revision for readability
6.2.1 Routine Management Measures	6.2.1 Routine Management Measures	List of measures broken out as section 6.2.1.1 and updated
6.2.2 Resource Conservation Issues - The "Points of Concern" Framework	6.2.2 Resource Conservation Issues—The Points of Concern Framework	Moderate revision for readability
6.2.3 Nonbiological Issues--The Socioeconomic Framework	6.2.3 Nonbiological Issues—The Socioeconomic Framework	Moderate revision for readability
6.2.3.1 Allocation	6.3 Allocation	No changes to text
6.3 Bycatch Management	--- [heading only]	--
6.3.1 Bycatch of Nongroundfish Species	6.5.2 Bycatch of Nongroundfish in Groundfish Fisheries	Text added, sections on ESA, MMPA & MBTA added
6.3.2 Standardized Reporting Methodology	6.4 Standardized Total Catch Reporting and ...	Substantially revised with new text
6.3.3 Measures to Control Bycatch	6.5 Bycatch Mitigation Program	Substantially revised with new text
6.4 Recreational Catch and Release Management	6.5.3.4 Recreational Catch and Release Management	Moderately revised
6.5 Other Management Measures	-- [Heading only]	--
6.5.1 Generic	-- [Heading only]	--
6.5.1.1 Permits	6.9.1 General Provisions for Permits	No changes to text
6.5.1.2 Observers	6.4.1.1 Monitoring Total Catch At Sea	New text added
6.5.1.3 Habitat Protection (General)	7.0 Essential Fish Habitat	Substantially revised
6.5.1.4 Vessel Safety Considerations	6.10.2 Vessel Safety	Substantially revised
6.5.2 Domestic--Commercial	6.1 Introduction	New text added
6.5.2.1 Permits (General)	6.9.1.1 Commercial Fisheries Permits	Moderately revised
6.5.2.2 Catch Restrictions	6.7 Catch Restrictions, 6.7.2 Commercial Fisheries	Text in 6.7 substantially revised; prohibited species discussion in 6.7.2 moderately revised

Current FMP	Location under revision	Notes
6.5.2.3 Gear Restrictions	6.6.1 Commercial Fisheries	Moderately revised
6.5.2.4 Reporting Requirements	6.4.2 Vessel Reporting Requirements, 6.9 Measures to Control Fishing Effort...	Substantially revised, new text, reorganized
6.5.2.5 Vessel Identification	6.10.3 Vessel Identification	Substantially revised
6.5.3 Domestic - Recreational	-- [Heading only]	--
6.5.3.1 Permits (General)	6.9.1.2 Recreational Fisheries Permits	No changes to text
6.5.3.2 Catch Restrictions	6.7 Catch Restrictions	Original 6.5.3.2 text equivalent to text in original 6.5.2.2; incorporated into new text
6.5.3.3 Gear Restrictions	Deleted	Equivalent text from 11.4 inserted in 6.6.2
6.5.4 Joint Venture--Domestic Vessels	Deleted	Obsolete – no joint venture fisheries
6.5.5 Joint Venture--Foreign Vessels	Deleted	Obsolete – no foreign fisheries
6.5.5.1 Permits	Deleted	Obsolete – no foreign fisheries
6.5.5.2 Target Species	Deleted	Obsolete – no foreign fisheries
6.5.5.3 Incidental Catch	Deleted	Obsolete – no foreign fisheries
6.5.5.4 Prohibited Species	Deleted	Obsolete – no foreign fisheries
6.5.5.5 Season and Area Restrictions	Deleted	Obsolete – no foreign fisheries
6.5.5.6 Reporting and Recordkeeping Requirements	Deleted	Obsolete – no foreign fisheries
6.5.5.7 Dumping	Deleted	Obsolete – no foreign fisheries
6.5.5.8 Fishery Closure	Deleted	Obsolete – no foreign fisheries
6.5.5.9 Observers	Deleted	Obsolete – no foreign fisheries
6.5.5.10 Other Restrictions	Deleted	Obsolete – no foreign fisheries
6.5.6 Foreign-Commercial	Deleted	Obsolete – no foreign fisheries
6.5.6.1 Permits	Deleted	Obsolete – no foreign fisheries
6.5.6.2 Target Species	Deleted	Obsolete – no foreign fisheries
6.5.6.3 Incidental Catch	Deleted	Obsolete – no foreign fisheries
6.5.6.4 Prohibited Species	Deleted	Obsolete – no foreign fisheries
6.5.6.5 Season, Area, and Gear Restrictions	Deleted	Obsolete – no foreign fisheries
6.5.6.6 Reporting and Recordkeeping Requirements	Deleted	Obsolete – no foreign fisheries
6.5.6.7 Dumping	Deleted	Obsolete – no foreign fisheries
6.5.6.8 Fishery Closure	Deleted	Obsolete – no foreign fisheries
6.5.6.9 Observers	Deleted	Obsolete – no foreign fisheries
6.5.6.10 Other Restrictions	Deleted	Obsolete – no foreign fisheries
6.5.7 Foreign-Recreational	Deleted	Obsolete – no foreign fisheries
6.5.8 Access Limitation and Capacity Reduction Programs	6.9.4 Data Collection	No changes to text
6.6 Essential Fish Habitat	7.0 ESSENTIAL FISH HABITAT	Revised by Amendment 19, text incorporated under section 7.1
6.6.1 Magnuson-Stevens Act Directives Relating to Essential Fish Habitat	7.1 Magnuson-Stevens Act Directives Relating to EFH	Revised by Amendment 19
6.6.2 Definition of Essential Fish Habitat for Groundfish	7.2 Definition of EFH	Revised by Amendment 19
6.6.2.1 Composite Essential Fish Habitat Identification	--	Replaced by Section 7.2.1 describing HSP methodology

Current FMP	Location under revision	Notes
6.6.3 Management Measures To Minimize Adverse Impacts on Essential Fish Habitat from Fishing	7.4 Management Measures To Minimize Adverse ...	Revised by Amendment 19
6.6.4 Review and Revision of Essential Fish Habitat Definitions and Descriptions	7.7 Review and Revision...	No changes to text
9.0 RESTRICTIONS ON OTHER FISEHERIES	6.7.2 Commercial Fisheries	Moderately revised
11.0 MANAGEMENT MEASURES THAT CONTINUE IN EFFECT WITH IMPLEMENTATION OF AMENDMENT 4		Introductory paragraph deleted
11.1 Vessel Identification	Deleted	Substitute reference to regulations, otherwise obsolete
11.2 Gear Restrictions	Deleted	11.2.1.1.1-11.2.1.1.6 moved to Chapter 2-definitions
11.2.1 Commercial Fishing	Deleted	Equivalent definition in Chapter 2
11.2.1.1 Trawl gear	6.6.1.2 Trawl Gear	Substantially revised, incorporated with text from 6.1.2
11.2.1.2 Fixed gear	6.6.1.3 Non-trawl Gear	Substantially revised, new text
11.2.1.3 Nontrawl gear	6.6.1.3 Non-trawl Gear	11.2.1.3.1-11.2.1.3.7 moved to Chapter 2-definitions
11.2.2 Recreational Fishing	6.6.2 Recreational Fisheries	Substantially revised
11.2.2.1 Hook-and-line		Moved to Chapter 2-definitions
11.2.2.2 Spears		Moved to Chapter 2-definitions
11.3 Species Managed with a Harvest Guideline or Quota	Deleted	Outdated and incorrect
11.4 Catch Restrictions	6.7 Catch Restrictions	Moderately revised
11.4.1 Commercial Fishing	Deleted	Outdated and incorrect
11.4.2 Recreational Fishing	Deleted	Outdated and incorrect
11.4.3 Restrictions on the Catch of Groundfish in Non-Groundfish Fisheries	Deleted	Outdated and incorrect
11.4.3.1 Pink shrimp	Deleted	Outdated and incorrect
11.4.3.2 Spot and ridgeback prawns	Deleted	Outdated and incorrect
11.5 Joint Ventures	Deleted	Outdated and incorrect
11.5.1 Pacific Whiting	Deleted	Outdated and incorrect
11.5.2 Jack Mackerel (North of 39 N. Latitude)	Deleted	Outdated and incorrect
11.5.3 Shortbelly Rockfish	Deleted	Outdated and incorrect
11.6 Foreign Fishery	Deleted	Outdated and incorrect
11.6.1 Pacific Whiting	Deleted	Outdated and incorrect
11.6.2 Jack Mackerel (North of 39 N. Latitude)	Deleted	Outdated and incorrect
11.7 Prohibitions	Deleted	Substitute reference to regulations in 6.10.4 Prohibitions and Penalties
11.8 Facilitation of Enforcement	Deleted	Substitute reference to regulations in 6.10.4 Prohibitions and Penalties

Current FMP	Location under revision	Notes
11.9 Penalties	Deleted	Substitute reference to regulations in 6.10.4 Prohibitions and Penalties

Table 3. Guide to revision of EFH appendix material added to the FMP by Amendment 11.

Current FMP	Location Under Revision
11.10 ESSENTIAL FISH HABITAT	Deleted as redundant to Section 7.1
11.10.1 Magnuson-Stevens Act Directives Relating to EFH	Deleted as redundant to Section 7.1
11.10.2 Definition of EFH for Groundfish, and Composite EFH Identification	Replaced by Appendix B
11.10.3 Adverse Impacts on EFH From Fishing Gear and Practices, and Measures to Manage Them	Replaced by Appendix C
11.10.3.1 Identification of Adverse Impacts of Fishing Gear on EFH	Replaced by Appendix C
11.10.3.2 Measures to Minimize Fishing Effects on Groundfish EFH	Deleted as redundant to Section 7.4
11.10.4 Adverse Impacts of Nonfishing Related Activities, Gear, and Practices, and Measures to Manage Them	Replaced by Appendix D
11.10.4.1 Adverse Nonfishing Impacts and Recommended Conservation Measures	Replaced by Appendix D
11.10.5 Consultation Procedures - Nonfishing Impacts	Deleted as redundant to Section 7.5
11.10.6 Research Needs	Incorporated into Appendix B

Note: In the July 1993 version of the FMP the Appendices appeared as Chapter 11.0. Section 11.10 was added by Amendment 11 in 1998. Sections 11.1–11.9 contain descriptive material about stocks, fisheries, habitat, and other applicable laws, which under the proposed revision will become Appendix A. Prior to the currently proposed amendments, this material was moved out of a chapter format to a separate volume, causing the remaining chapters in the FMP to be renumbered. The Appendices contain descriptive information in support of the management program. This material may be updated without the need for a formal FMP amendment process. Language to this effect is added to Chapter 1 of the FMP.

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1.0 INTRODUCTION

1.1 Evolution of the Management Plan

The Pacific Coast Groundfish Fishery Management Plan (FMP) was approved by the U.S. Secretary of Commerce (Secretary) on January 4, 1982, and implemented on October 5, 1982. Prior to implementation of the FMP, management of domestic groundfish fisheries was under the jurisdiction of the states of Washington, Oregon, and California. State regulations have been in effect on the domestic fishery for ~~about~~ 90 more than 100 years and ~~with~~ each state acting independently in both management and enforcement. ~~However~~ Furthermore, many fisheries overlapped state boundaries and participants often operated in more than one state. Management and a lack of uniformity of regulation ~~regulations had become~~ a difficult problem, which stimulated the formation of the Pacific States Marine Fisheries Commission (PSMFC) in 1947. PSMFC had no regulatory power but acted as a coordinating entity with authority to submit specific recommendations to states for their adoption. ~~Between implementation of~~ The 1977 Fishery Conservation and Management Act (later amended and renamed the Magnuson-Stevens Fishery Conservation and Management Act (or Magnuson-Stevens Act, then called the Fishery Conservation and Management Act or FCMA) in) established eight regional fishery management Councils, including the Pacific Council. ~~Between~~ 1977 and the implementation of the groundfish FMP in 1982, state agencies worked with the Council to address conservation issues. Specifically, in 1981, ~~the management managers~~ proposed a rebuilding program for Pacific ocean perch. To implement this program, the states of Oregon and Washington established landing limits for Pacific ocean perch in the Vancouver and Columbia management areas.

Management of foreign fishing operations began in February 1967 when the U.S. and U.S.S.R. signed the first bilateral fishery agreement affecting trawl fisheries off Washington, Oregon, and California. ~~The U.S.~~ later signed bilateral agreements with Japan and Poland ~~were also signed for fishing off the U.S. West Coast.~~ Each of these agreements was renegotiated to reduce the impact of foreign fishing on important West Coast stocks, primarily rockfish, Pacific whiting, and sablefish. When the U.S. extended its jurisdiction to 200 miles (upon signing the Fishery Conservation and Management Act of 1976), the National Marine Fisheries Service (NMFS) developed and the Secretary implemented the preliminary management plan for the foreign trawl fishery off the Pacific Coast. From 1977 to 1982, the foreign fishery was managed under that plan. Many of these regulations were incorporated into the FMP, which provided for continued management of the foreign fishery.

~~Subsequent to initial implementation of Joint-venture fishing, where domestic vessels caught the fish to be processed aboard foreign vessels, began in 1979 and by 1989 had entirely supplanted directed foreign fishing. These joint ventures primarily targeted Pacific whiting. Joint-venture fisheries were then rapidly replaced by wholly domestic processing; by 1991 foreign participation had ended and U.S.-flagged motherships, catcher-processors, and shore-based vessels had taken over the Pacific whiting fishery. Since then U.S. fishing vessels and seafood processors have fully utilized Pacific Coast fishery resources. Although the Council may entertain applications for foreign or joint venture fishing or processing at any time, provisions for these activities have been removed from the FMP. Re-establishing such opportunities would require another FMP amendment.~~

~~Since it was first implemented in 1982, the Council has amended the groundfish FMP, the Council has developed 11 amendments 18 times in response to changing resource and fishery conditions. Early amendments added jack mackerel to the fishery management unit, established a management framework for modifying gear regulations, and responded to new requirements in changes in the fishery, reauthorizations of the Magnuson-Stevens Act pertaining to habitat and weather related vessel safety issues. Amendment 4 was, and litigation that invalidated provisions incorporated by earlier amendments. During the first ten years of plan implementation, up to 1992, the Secretary approved six amendments. Amendment 4, approved in 1990,~~

was the most significant early amendment; in addition to a comprehensive update ~~that~~ and reorganization of the FMP, it established additional framework procedures for establishing and modifying management measures and streamlining the decision and implementation process. Amendment 5 addressed overfishing standards, and Amendment 6. Another important change was implemented in 1992 with Amendment 6, which established a license limitation (limited entry) program intended to address overcapitalization of the fishing sector by restricting further participation in groundfish trawl, longline, and trap fisheries.

The next decade, through 2002, saw the approval of another seven amendments. Amendment 9 modified the limited entry program by establishing a sablefish endorsement for longline and pot permits. Amendments 11 ~~was prepared in response, 12, 13 were responses to changes in the Magnuson-Stevens Act due to the 1996 Sustainable Fisheries Act amendments to the Magnuson-Stevens Act that, among other provisions,~~ These changes required FMPs to identify essential fish habitat (EFH), more actively reduce bycatch and bycatch mortality, and strengthen conservation measures to both prevent fish stocks from becoming overfished, and promote rebuilding.

The groundfish FMP has evolved into a document that describes the Council's and the NMFS's procedures for establishing and modifying management measures. It establishes the authority for and limitations on Council actions, but in general does not include specific fishing regulations; rather, it describes how the Council will develop its recommendations for fishing regulations and the process for public involvement in that process. of any stocks that had become overfished. Amendment 14, implemented in 2001, built on Amendment 9 to further refine the limited entry permit system for the economically important fixed gear sablefish fishery. It allowed a vessel owner to "stack" up to three limited entry permits on one vessel along with associated sablefish catch limits. This in effect established a limited tradable quota system for participants in the primary sablefish fishery.

Most of the amendments adopted since 2001 deal with legal challenges to the three SFA-related amendments mentioned above, which were remanded in part by the Federal Court. These have required new amendments dealing with overfishing, bycatch monitoring and mitigation, and essential fish habitat. In relation to the first of these three issues, the Magnuson-Stevens Act now requires FMPs to identify thresholds for both the fishing mortality rate constituting overfishing and the stock size below which a stock is considered overfished. Once the Secretary determines a stock is overfished, the Council must develop and implement a plan to rebuild it to a healthy level. Since these thresholds were established for Pacific Coast groundfish, nine stocks have been declared overfished. The Court found that the rebuilding plan framework adopted by Amendment 12 did not comply with the Magnuson-Stevens Act. In response, Amendments 16-1, 16-2, and 16-3 established the current regime for managing these overfished species.¹ Amendment 16-1, approved in 2003, incorporated guidelines for developing and adopting rebuilding plans and substantially revised Chapters 4 and 5. Amendments 16-2 and 16-3, approved in 2004, incorporated key elements of rebuilding plans into Section 4.5.4.

Amendment 17 modified the periodic process the Council uses to establish and modify harvest specifications and management measures for the groundfish fishery. Although not an SFA-related issue, this change did solve a procedural problem raised in litigation. The Council now establishes specifications and management measures every two years, allowing more time for them to be developed during the Council's public meetings.

Amendment 18, approved in [2006], addresses a remand of elements in Amendment 11 related to bycatch monitoring and mitigation. It incorporates a description of the Council's bycatch-related policies and programs into Chapter 6. It also effected a substantial reorganization and update of the FMP, so that it better reflects the Council's and the NMFS's evolving framework approach to management. Under this framework,

¹ Although the Secretary declared Pacific whiting overfished in 2002, a 2004 stock assessment found that it had recovered to its rebuilt level. Thus, a rebuilding plan for this species was not adopted by these amendments.

the Council may recommend a range of broadly defined management measures for NMFS to implement. In addition to the range of measures, this FMP specifies the procedures the Council and NMFS must follow to establish and modify these measures. When first implemented, the FMP specified a relatively narrow range of measures, which were difficult to modify in response to changes in the fishery. The current framework allows the Council to effectively respond when faced with the dynamic challenges posed by the current groundfish fishery.

Amendment 19, also approved in [2006], revises the definition of groundfish EFH, identified habitat areas of particular concern, and describes management measures intended to mitigate the adverse effects of fishing on EFH. This amendment supplants the definition of EFH added to the FMP by Amendment 11.

1.2 How This Document is Organized

The groundfish FMP is organized into 11 chapters

Chapter 1 (this chapter) describes the development of the FMP and how it is organized.

Chapter 2 describes the goals and objectives of the plan and defines key terms and concepts.

Chapter 3 specifies the geographic area covered by this plan and lists the species managed by it, referred to as the fishery management unit, or FMU.

Chapter 4 describes how the Council determines harvest levels. These harvest limits are related to the maximum sustainable yield (MSY) and allowable biological catch (ABC) for FMU species. Precautionary reductions from these thresholds may be applied, depending on the management status of a given stock. If, according to these thresholds, a stock is determined to be overfished, the Council must recommend measures to end overfishing and develop a rebuilding plan, as specified in this chapter. Based on the thresholds, criteria and procedures described in this chapter, the Council specifies an optimum yield (OY), or harvest limit, for managed stocks or stock complexes.

Chapter 5 describes how the Council periodically specifies harvest levels and the management measures needed to prevent catches from exceeding those levels. Currently, the Council develops these specifications over the course of three meetings preceding the start of a two-year management period. (Separate OYs are specified for each of the two years in this period.) This chapter also describes how the stock assessment/fishery evaluation (SAFE) document, which provides information important to management, is developed.

Chapter 6 describes the management measures used by the Council to meet the objectives of the Magnuson-Stevens Act and this FMP. As noted above, this FMP is a framework plan; therefore, the range of management measures is described in general terms while the processes necessary to establish or modify different types of management measures are detailed. Included in the description of management measures is the Council's program for monitoring total catch (which includes bycatch) and minimizing bycatch.

Chapter 7 identifies EFH for groundfish FMU species and the types of measures that may be used to mitigate adverse impacts to essential fish habitat from fishing.

Chapter 8 describes procedures followed by the Council to evaluate and recommend issuing exempted fishing permits (EFPs). Permitted vessels are authorized, for limited experimental purposes, to harvest groundfish by means or in amounts that would otherwise be prohibited by this FMP and its implementing regulations.

These permits allow experimentation in support of FMP goals and objectives. EFPs have been used, for example, to test gear types that result in less bycatch.

Chapter 9 provides criteria for determining what activities involving groundfish would qualify as scientific research and could therefore qualify for special treatment under the management program.

Chapter 10 describes the procedures used to review state regulations in order to ensure that they are consistent with this FMP and its implementing regulations.

Chapter 11 describes the groundfish limited entry program.

Appendix A contains descriptions of the biological, economic, social, and regulatory characteristics of the groundfish fishery.

Appendix B contains detailed information on groundfish EFH.

Appendix C describes the effects of fishing on groundfish EFH.

Appendix D describes the effects of activities other than fishing on groundfish EFH.

The appendices contain supporting information for the management program. Because these appendices do not describe the management framework or Council groundfish management policies and procedures, and only supplement the required and discretionary provisions of the FMP described in §303 of the Magnuson-Stevens Act, they may be periodically updated without being subjected to the Secretarial review and approval process described in §304(a) of the Magnuson-Stevens Act. These appendices are published under separate cover.

2.0 GOALS AND OBJECTIVES

2.1 Goals and Objectives for Managing the Pacific Coast Groundfish Fishery

The Council is committed to developing long-range plans for managing the Washington, Oregon, and California groundfish fisheries that will promote a stable planning environment for the seafood industry, including marine recreation interests, and will maintain the health of the resource and environment. In developing allocation and harvesting systems, the Council will give consideration to maximizing economic benefits to the United States, consistent with resource stewardship responsibilities for the continuing welfare of the living marine resources. Thus, management must be flexible enough to meet changing social and economic needs of the fishery as well as to address fluctuations in the marine resources supporting the fishery. The following goals have been established in order of priority for managing the West Coast groundfish fisheries, to be considered in conjunction with the national standards of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

Management Goals.

Goal 1 - Conservation. Prevent overfishing and rebuild overfished stocks by managing for appropriate harvest levels and prevent, to the extent practicable, any net loss of the habitat of living marine resources.

Goal 2 - Economics. Maximize the value of the groundfish resource as a whole.

Goal 3 - Utilization. Within the constraints of overfished species rebuilding requirements, achieve the maximum biological yield of the overall groundfish fishery, promote year-round availability of quality seafood to the consumer, and promote recreational fishing opportunities.

Objectives.

To accomplish these management goals, a number of objectives will be considered and followed as closely as practicable:

Conservation.

Objective 1. Maintain an information flow on the status of the fishery and the fishery resource which allows for informed management decisions as the fishery occurs.

Objective 2. Adopt harvest specifications and management measures consistent with resource stewardship responsibilities for each groundfish species or species group.

Objective 3. For species or species groups that are overfished, develop a plan to rebuild the stock as required by the Magnuson-Stevens Act.

Objective 4. Where conservation problems have been identified for nongroundfish species and the best scientific information shows that the groundfish fishery has a direct impact on the ability of that species to maintain its long-term reproductive health, the Council may consider establishing management measures to control the impacts of groundfish fishing on those species. Management measures may be imposed on the groundfish fishery to reduce fishing mortality of a nongroundfish species for documented conservation reasons. The action will be designed to minimize disruption of the groundfish fishery, in so far as consistent with the goal to minimize the bycatch of nongroundfish species, and will

not preclude achievement of a quota, harvest guideline, or allocation of groundfish, if any, unless such action is required by other applicable law.

Objective 5. Describe and identify essential fish habitat (EFH), adverse impacts on EFH, and other actions to conserve and enhance EFH, and adopt management measures that minimize, to the extent practicable, adverse impacts from fishing on EFH.

Economics.

Objective 6. Attempt to achieve the greatest possible net economic benefit to the nation from the managed fisheries.

Objective 7. Identify those sectors of the groundfish fishery for which it is beneficial to promote year-round marketing opportunities and establish management policies that extend those sectors fishing and marketing opportunities as long as practicable during the fishing year.

Objective 8. Gear restrictions to minimize the necessity for other management measures will be used whenever practicable. Encourage development of practicable gear restrictions intended to reduce regulatory and/or economic discards through gear research regulated by exempted fishing permits.

Objective 9. ~~Develop management measures and policies that foster and encourage full utilization (harvesting and processing) of the Pacific Coast groundfish resources by domestic fisheries. Achieve a level of harvest capacity in the fishery that is appropriate for a sustainable harvest and low discard rates, and which results in a fishery that is diverse, stable, and profitable. This reduced capacity should lead to more effective management for many other fishery problems. For the short term, adjust harvest capacity to a level consistent with the allowable harvest levels for the 2000 fishing year, under the assumption that stock rebuilding will require reduced harvests for at least through 2020. Maintaining a year-round fishery may not be a short term priority.~~ ***[Strategic Plan Capacity Reduction Goal, 2000]***

Utilization.

Objective 10. Develop management measures and policies that foster and encourage full utilization (harvesting and processing) of the Pacific Coast groundfish resources by domestic fisheries.

Objective 11. Recognizing the multispecies nature of the fishery and establish a concept of managing by species and gear or by groups of interrelated species.

Objective 12. Develop management programs that reduce regulations-induced discard and/or which reduce economic incentives to discard fish. ~~Strive to reduce the economic incentives and regulatory measures that lead to wastage of fish.~~ Develop management measures that minimize bycatch to the extent practicable and, to the extent that bycatch cannot be avoided, minimize the mortality of such bycatch. Promote and support monitoring programs to improve estimates of total fishing-related mortality and bycatch, as well as those to improve other information necessary to determine the extent to which it is practicable to reduce bycatch and bycatch mortality.

Objective 12. ~~Provide for foreign participation in the fishery, consistent with the other goals to take that portion of the optimum yield (OY) not utilized by domestic fisheries while minimizing conflict with domestic fisheries.~~

Social Factors.

Objective 13. When conservation actions are necessary to protect a stock or stock assemblage, attempt to develop management measures that will affect users equitably.

Objective 14. Minimize gear conflicts among resource users.

Objective 15. When considering alternative management measures to resolve an issue, choose the measure that best accomplishes the change with the least disruption of current domestic fishing practices, marketing procedures, and the environment.

Objective 16. Avoid unnecessary adverse impacts on small entities.

Objective 17. Consider the importance of groundfish resources to fishing communities, provide for the sustained participation of fishing communities, and minimize adverse economic impacts on fishing communities to the extent practicable.

Objective 18. Promote the safety of human life at sea.

[Amended; 7, 11, 13, 16-1]

2.2 Operational Definition of Terms

Acceptable Biological Catch (ABC) is a biologically based estimate of the amount of fish that may be harvested from the fishery each year without jeopardizing the resource. It is a seasonally determined catch that may differ from MSY for biological reasons. It may be lower or higher than MSY in some years for species with fluctuating recruitment. The ABC may be modified to incorporate biological safety factors and risk assessment due to uncertainty. Lacking other biological justification, the ABC is defined as the MSY exploitation rate multiplied by the exploitable biomass for the relevant time period.

Biennial fishing period is defined as a 24-month period beginning January 1 and ending December 31.

Bottom (or flatfish bottom) trawl is a trawl in which the otter boards or the footrope of the net are in contact with the seabed. It includes roller (or bobbin) trawls, Danish and Scottish seine gear, and pair trawls fished on the bottom. [From 11.2.1.1.2]

Bottom-contact gear types by design and through normal use make contact with the sea floor. Such contact is more than intermittent in duration and areal extent.

Bycatch means fish which are harvested in a fishery, but which are not sold or kept for personal use and includes economic discards and regulatory discards. Such term does not include fish released alive under a recreational catch and release fishery management program.

Chafing gear is webbing or other material attached to the codend of a trawl net to protect the codend from wear. [From 11.2.1.1.5]

Charter fishing means fishing from a vessel carrying a passenger for hire (as defined in section 2101(21a) of title 46, United States Code) who is engaged in recreational fishing.

Closure, when referring to closure of a fishery, means that taking and retaining, possessing or landing the particular species or species complex is prohibited.

Council means the Pacific Fishery Management Council, including its Groundfish Management Team (GMT), Scientific and Statistical Committee (SSC), Groundfish Advisory Subpanel (GAP), and any other committee established by the Council.

Commercial fishing is (1) fishing by a person who possesses a commercial fishing license or is required by law to possess such license issued by one of the states or the federal government as a prerequisite to taking, landing, and/or sale; or (2) fishing which results in or can be reasonably expected to result in sale, barter, trade, or other disposition of fish for other than personal consumption.

Density dependence is the degree to which recruitment declines as spawning biomass declines. Typically we assume that a Beverton-Holt form is appropriate and that the level of density-dependence is such that the recruitment only declines by ten percent when the spawning biomass declines by 50%.

Domestic annual harvest (DAH) is the estimated total harvest of groundfish by U.S. fishermen. It includes the portion expected to be utilized by domestic processors and the estimated portion, if any, that will be delivered to those foreign processors joint venture processing (JVP) that are permitted to receive U.S. harvested groundfish in the exclusive economic zone (EEZ).

Domestic annual processing (DAP) is the estimated annual amount of U.S. harvest that domestic processors are expected to process and the amount of fish that will be harvested, but not processed (e.g., marketed as fresh whole fish used for private consumption or used for bait).

Double-walled codend is a codend constructed of two walls of webbing. **[From 11.2.1.1.6]**

$F_{x\%}$ is the rate of fishing mortality that will reduce female spawning biomass per recruit to x percent of its unfished level. $F_{100\%}$ is zero, and $F_{35\%}$ is a reasonable proxy for F_{MSY} .

Economic discards means fish which are the target of a fishery, but which are not retained because they are of an undesirable size, sex, quality, or for other economic reasons.

Essential fish habitat means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

Exploitable biomass is the biomass that is available to a unit of fishing effort. Defined as the sum of the population biomass at age (calculated as the mean within the fishing year) multiplied by the age-specific availability to the fishery. Exploitable biomass is equivalent to the catch biomass divided by the instantaneous fishing mortality rate.

F is the instantaneous rate of fishing mortality. F typically varies with age, so the F values are presented for the age with maximum F . Fish of other ages have less availability to the fishery, so a unit of effort applies a lower relative level of fishing mortality to these fish.

F_{MSY} is the fishing mortality rate that maximizes catch biomass in the long term.

$F_{0.1}$ is the fishing mortality rate at which a change in fishing mortality rate will produce a change in yield per recruit that is ten percent of the slope of the yield curve at nil levels of fishing mortality.

F_{OF} is the rate of fishing mortality defined as overfishing.

Fishing means (1) the catching, taking, or harvesting of fish; (2) the attempted catching, taking, or harvesting of fish; (3) any other activity which can reasonably be expected to result in the catching, taking, or harvesting of fish; or (4) any operations at sea in support of, or in preparation for, any activity described above. This term does not include any activity by a vessel conducting authorized scientific research.

Fishing year is defined as January 1 through December 31.

Fishing community means a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economy needs and includes fishing vessel owners, operators, crew, and recreational fishers and United States fish processors that are based in such community.

Fixed gear (anchored nontrawl gear) includes longline, trap or pot, set net, and stationary hook-and-line gear (including commercial vertical hook-and-line) gears. [From 11.2.1.2]

Gillnet is a single-walled, rectangular net which is set upright in the water. [From 11.2.1.3.5]

Harvest guideline (HG) is an specified numerical harvest objective which is not a quota. Attainment of a HG does not require closure of a fishery.

Hook-and-line means one or more hooks attached to one or more lines. Commercial hook-and-line fisheries may be mobile (troll) or stationary (anchored). [From 11.2.1.3.2]

Incidental catch or incidental species means groundfish species caught when fishing for the primary purpose of catching a different species.

Individual fishing quota (IFQ) means a federal permit under a limited access system to harvest a quantity of fish expressed by a unit or units representing a percentage of the total allowable catch of a fishery that may be received or held for exclusive use by a person.

Joint venture processing (JVP) is the estimated portion of DAH that exceeds the capacity and intent of U.S. processors to utilize, or for which domestic markets are not available, that is expected to be harvested by U.S. fishermen and delivered to foreign processors in the EEZ. (JVP = DAH – DAP.)

Longline is a stationary, buoyed, and anchored groundline with hooks attached, so as to fish along the seabed. [From 11.2.1.3.3]

Maximum sustainable yield is an estimate of the largest average annual catch or yield that can be taken over a significant period of time from each stock under prevailing ecological and environmental conditions. It may be presented as a range of values. One MSY may be specified for a group of species in a mixed-species fishery. Since MSY is a long-term average, it need not be specified annually, but may be reassessed periodically based on the best scientific information available.

Midwater (pelagic or off-bottom) trawl is a trawl in which the otter boards may contact the seabed, but the footrope of the net remains above the seabed. It includes pair trawls if fished in midwater. A midwater trawl has no rollers or bobbins on the net. [From 11.2.1.1.4]

MSY stock size means the largest long-term average size of the stock or stock complex, measured in terms of spawning biomass or other appropriate units, that would be achieved under an MSY control rule in which the fishing mortality rate is constant. The proxy typically used in this fishery management plan is 40% of the estimated unfished biomass, although other values based on the best scientific information are also authorized.

Nontrawl gear means all legal commercial gear other than trawl gear. [From 11.2.1.3]

Optimum yield means the amount of fish which will provide the greatest overall benefit to the U.S., particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems, is prescribed as such on the basis of the maximum sustainable yield from the fishery as reduced by any relevant economic, social, or ecological factor; and in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the maximum sustainable yield in such fishery.

Overfished describes any stock or stock complex whose size is sufficiently small that a change in management practices is required to achieve an appropriate level and rate of rebuilding. The term generally describes any stock or stock complex determined to be below its overfished/rebuilding threshold. The default proxy is generally 25% of its estimated unfished biomass; however, other scientifically valid values are also authorized.

Overfishing means fishing at a rate or level that jeopardizes the capacity of a stock or stock complex to produce MSY on a continuing basis. More specifically, overfishing is defined as exceeding a maximum allowable fishing mortality rate. For any groundfish stock or stock complex, the maximum allowable mortality rate will be set at a level not to exceed the corresponding MSY rate (F_{MSY}) or its proxy (e.g., $F_{35\%}$).

Processing or to process means the preparation or packaging of groundfish to render it suitable for human consumption, retail sale, industrial uses, or long-term storage, including, but not limited to, cooking, canning, smoking, salting, drying, filleting, freezing, or rendering into meal or oil, but does not mean heading and gutting unless additional preparation is done.

Processor means a person, vessel, or facility that (1) engages in processing, or (2) receives live groundfish directly from a fishing vessel for sale without further processing.

Prohibited species are those species and species groups which must be returned to the sea as soon as is practicable with a minimum of injury when caught and brought aboard except when their retention is authorized by other applicable law. Exception may be made in the implementing regulations for tagged fish, which must be returned to the tagging agency, or for examination by an authorized observer.

Quota means a specified numerical harvest objective, the attainment (or expected attainment) of which causes closure of the fishery for that species or species group. Groundfish species or species groups under this FMP for which quotas have been achieved shall be treated in the same manner as prohibited species.

Recreational fishing means fishing for sport or pleasure, but not for sale.

Regulatory discards are fish harvested in a fishery which fishermen are required by regulation to discard whenever caught or are required by regulation to retain, but not sell.

~~Reserve is a portion of the harvest guideline or quota set aside at the beginning of the year to allow for uncertainties in preseason estimates of DAP and JVP.~~

Roller (or bobbin) trawl is a bottom trawl that has footropes equipped with rollers or bobbins made of wood, steel, rubber, plastic, or other hard material which keep the footrope above the seabed, thereby protecting the net. [From 11.2.1.1.3]

Set net is a stationary, buoyed, and anchored gillnet or trammel net. [From 11.2.1.3.4]

Stock Assessment and Fishery Evaluation (SAFE) document is a document prepared by the Council that provides a summary of the most recent biological condition of species in the fishery management unit, and the social and economic condition of the recreational and commercial fishing industries, and the fish processing industry. It summarizes, on a periodic basis, the best available information concerning the past, present, and possible future condition of the stocks and fisheries managed by the FMP.

Target fishing means fishing for the primary purpose of catching a particular species or species group (the target species).

~~Total allowable level of foreign fishing (TALFF) is the amount of fish surplus to domestic needs and available for foreign harvest. It is a quota determined by deducting the DAH and reserve, if any, from a species harvest guideline or quota.~~

A total catch limit is a portion of the OY for a groundfish FMU species, stock, or stock complex assigned to a defined fishery sector or to an individual vessel. Total catch is defined as landed catch plus bycatch (discard) mortality. The Council may specify total catch limits that are transferable or nontransferable among sectors or tradable or nontradable between vessels.

Trammel net is a gillnet made with two or more walls joined to a common float line. **[From 11.2.1.3.6]**

Trap (or pot) is a portable, enclosed device with one or more gates or entrances and one or more lines attached to surface floats. **[11.2.1.3.7]**

Spawning biomass is the biomass of mature female fish at the beginning of the year. If the production of eggs is not proportional to body weight, then this definition should be modified to be proportional to expected egg production.

Spawning biomass per recruit is the expected egg production of a female fish over its lifetime. Alternatively, this is the mature female biomass of an equilibrium stock divided by the mean level of recruitment that produced this stock.

Spear is a sharp, pointed, or barbed instrument on a shaft. Spears may be propelled by hand or by mechanical means. **[From 11.2.2.2]**

Vertical hook-and-line gear (commercial) is hook-and-line gear that involves a single line anchored at the bottom and buoyed at the surface so as to fish vertically. **[From 11.2.1.3.1]**

3.0 AREAS AND STOCKS INVOLVED

No changes in this chapter.

4.0 PREVENTING OVERFISHING AND ACHIEVING OPTIMUM YIELD

No Changes in this chapter.

5.0 PERIODIC SPECIFICATION AND APPORTIONMENT OF HARVEST LEVELS

The ability to establish and adjust harvest levels is the first major tool at the Council's disposal to exercise its resource stewardship responsibilities. Each biennial fishing period, the Council will assess the biological, social, and economic condition of the Pacific Coast groundfish fishery and update maximum sustainable yield (MSY) estimates or proxies for specific stocks (management units) where new information on the population dynamics is available. The Council will make this information available to the public in the form of the *Stock Assessment and Fishery Evaluation (SAFE)* document described in Section 5.1. Based upon the best scientific information available, the Council will evaluate the current level of fishing relative to the MSY level for stocks where sufficient data are available. Estimates of the acceptable biological catch (ABC) for major stocks will be developed, and the Council will identify those species or species groups which it proposes to be managed by the establishment of numerical harvest levels (optimum yields [OYs], harvest guidelines [HGs], or quotas). For those stocks judged to be below their overfished/rebuilding threshold, the Council will develop a stock rebuilding management strategy.

The process for specification of numerical harvest levels includes the estimation of ABC, the establishment of OYs for various stocks, and the calculation of specified allocations between harvest sectors, and the apportionment of numerical specifications to domestic annual processing (DAP), joint venture processing (JVP), total allowable level of foreign fishing (TALFF), and the reserve. The specification of numerical harvest levels described in this chapter is the process of designating and adjusting overall numerical limits for a stock either throughout the entire fishery management area or throughout specified subareas. The process normally occurs biennially between November and June, but can occur, under specified circumstances, at other times of the fishing year. The Council will identify those OYs which should be designated for allocation between limited entry and open access sectors of the commercial industry. Other numerical limits which allocate the resource or which apply to one segment of the fishery and not another ~~are~~ would be imposed through one of the management measures processes at either 6.2 C or D in Chapter 6. ~~the socioeconomic framework process described in Chapter 6 rather than the specification process.~~

...

5.5 Inseason Procedures for Establishing or Adjusting Specifications

5.5.1 Inseason Adjustments to ABCs

Under the biennial specifications and management measures process, stock assessments for most species will become available every other year, prior to the November Council meeting that begins the three-meeting process for setting specifications and management measures. The November Council meeting that begins that three-meeting process will be the November of the first fishing year in a biennial fishing period. If the Council determines that any of the ABCs or OYs set in the prior management process are not adequately conservative to meet rebuilding plan goals for an overfished species, harvest specifications for that overfished species and/or for co-occurring species may be revised for the second fishing year of the then current biennial management period.

Beyond this process, ABCs, OYs, HGs, and quotas may only be modified in cases where a harvest specification announced at the beginning of the fishing period is found to have resulted from incorrect data or from computational errors. If the Council finds that such an error has occurred, it may recommend the Secretary publish a notice in the *Federal Register* revising the incorrect harvest specification at the earliest possible date.

5.5.2 Inseason Establishment and Adjustment of OYs, HGs, and Quotas

OYs and HGs may be established and adjusted inseason (1) for resource conservation through the points of concern framework described in Chapter 6; (2) in response to a technical correction to ABC described above; or, (3) under the socioeconomic framework described in Chapter 6.

Quotas may be established and adjusted inseason only for resource conservation or in response to a technical correction to ABC. These constraints on establishing and adjusting OYs, HGs, and quotas do not apply to the process for establishing and adjusting sector-specific catch limits, which is provided in section 6.5.3.2.

6.0 MANAGEMENT MEASURES

6.1 Introduction

[6.0 Management Measures]

The FMP, as amended, establishes the fishery management program and the process and procedures the Council will follow in making adjustments to that program. It also sets the limits of management authority of the Council and the Secretary when acting under the FMP. The preceding two chapters describe the procedures for determining appropriate harvest levels and establishing them on a periodic basis. This chapter describes the procedures and methods that may be used to directly control fishing activities so that total catch of a given species or species group does not exceed specified harvest limits. It is organized around five major themes:

- Section 6.2 describes the procedures for establishing and adjusting management measures, including two decision-making frameworks the Council (in conjunction with its advisory bodies) uses to decide whether management measures need adjustment. These framework procedures allow management decisions, as long as they are consistent with the provisions of this FMP (including the frameworks), to be implemented via Federal regulation without first amending the FMP. This section also describes the procedures for promulgating the regulations needed to implement the management measures authorized by this FMP.
- Section 6.3 describes the criteria the Council will consider when establishing management measures intended to directly allocate harvest opportunity.
- Sections 6.4 and 6.5 describe methods to account for all sources of fishing mortality and to reduce bycatch, and especially bycatch mortality. Bycatch is defined in the Magnuson-Stevens Act as “fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards” (16 U.S.C. 1802(2)). Section 6.4 also describes those additional measures necessary to monitor catch and effort or to enforce regulations.
- Section 6.6 through 6.9 inventory the range of management measures available to the Council, as authorized by this FMP. Not all of these management measures will be implemented at any given time.
- Section 6.10 describes those requirements that support the enforcement of management measures.

[6.5.2 Domestic—Commercial]

These procedures, measures, and requirements must be consistent with the goals and objectives of the FMP, the Magnuson-Stevens Act, and other applicable law. All measures, unless otherwise specified, apply to all domestic vessels regardless of whether catch is landed and processed on shore or processed at sea. The procedures by which the Council develops recommendations on revising management measures, and by which NMFS implements those recommendations, are found in Section 6.2.

6.1.1 Overview of Management Measures For West Coast Groundfish Fisheries

[6.1 General List of Management Measures]

In the early stages of fishery development, there is generally little concern with management strategies. As fishing effort increases, management measures become necessary to prevent overfishing and the resulting

adverse social and economic impacts. Although recruitment, growth, natural mortality, and fishing mortality affect the size of fish populations, fishery managers only have control over one of these factors—fishing mortality. The principal measures available to the Council to control fishing mortality of the groundfish fisheries in the Washington, Oregon, and California region are:

- Measures to reduce bycatch and bycatch mortality – described in 6.5.
- Defining authorized fishing gear and regulating the configuration and deployment of fishing gear, including mesh size in nets and escape panels or ports in traps—described in Section 6.6.
- Restricting catches by defining prohibited species and establishing landing, trip frequency, bag, and size limits—described in Section 6.7.
- Establishing fishing seasons and closed areas—described in Section 6.8
- Limiting fishing capacity or effort through permits, licenses and endorsements, and quotas, or by means of input controls on fishing gear, such as restrictions on trawl size/shape or longline length or number of hooks or pots—described in Section 6.9. Fishing capacity may be further limited through programs that reduce participation in the fishery by retiring permits and/or vessels.

Although this chapter only discusses in detail the types of management measures outlined above, the Council may recommend and NMFS may implement other useful management measures through the appropriate rulemaking process, as long as they are consistent with the criteria and general procedures contained in this FMP.

6.2 General Procedures for Establishing and Adjusting Management Measures

[6.2 General Procedures for Establishing and Adjusting Management Measures]

This FMP establishes two framework procedures through which the Council is able to recommend the establishment and adjustment of specific management measures for the Pacific Coast groundfish fishery. The *points of concern framework* allows the Council to develop management measures that respond to resource conservation issues; the *socioeconomic framework* allows the Council to develop management measures in response to social, economic, and ecological issues that affect fishing communities. ~~The *habitat conservation framework* allows the Council to modify the number, extent, and location of areas closed to bottom trawling in order to protect essential fish habitat.~~ Criteria associated with each framework form the basis for Council recommendations, and Council recommendations will be consistent with them. The process for developing and implementing management measures normally will occur over the span of at least two Council meetings, with an exception that provides for more timely Council consideration under certain specific conditions.

The time required to take action under ~~either any~~ framework will vary depending on the nature of the action, its impacts on the fishing industry, resource, and environment, and review of these impacts by interested parties. This depends on the range of biological, social, and economic impacts that may need to be considered at the time a particular change in regulations is proposed. Furthermore, other applicable law (e.g., the National Environmental Policy Act, Administrative Procedures Act, Regulatory Flexibility Act, relevant Executive Orders, etc.) may require additional analysis and public comment before measures may be implemented by the Secretary.

The Secretary will develop management measures recommended by the Council for review and public comment as publications in the *Federal Register*, either as notices or regulations. Generally, management

measures of broad applicability and permanent effectiveness should be published as regulations. More narrowly applicable measures, which may only apply for short duration (one biennium or less) and may also require frequent adjustment, should be published as notices.

Management measures are normally imposed, adjusted, or removed at the beginning of the biennial fishing period, but may, if the Council determines it necessary, be imposed, adjusted, or removed at any time during the period. Management measures may be imposed for ~~habitat protection~~, resource conservation, or social or economic reasons consistent with the criteria, procedures, goals, and objectives set forth in the FMP.

The NMFS Regional Administrator will review the Council's recommendation, supporting rationale, public comments, and other relevant information and determine whether to approve, disapprove, or partially approve the Council's recommendation. If the recommendation is approved, NMFS will implement the recommendation through regulation or notice, as appropriate. NMFS will explain any disapproval or partial disapproval of the recommendation to the Council in writing.

The procedures specified in this chapter do not affect the authority of the Secretary to take emergency regulatory action as provided for in Section 305(c) of the Magnuson-Stevens Act if an emergency exists involving any groundfish resource, or to take such other regulatory action as may be necessary to discharge the Secretary's responsibilities under Section 305(d) of the Magnuson-Stevens Act.

Four different categories of management actions are authorized by this FMP, each of which requires a slightly different process. Management measures may be established, adjusted, or removed using any of the four procedures. The four basic categories of management actions are described below

A. Automatic Actions

The NMFS Regional Administrator may initiate automatic management actions without prior public notice, opportunity to comment, or a Council meeting. These actions are nondiscretionary, and the impacts must be reasonably accountable, based on previous application of the action or past analysis. Examples include fishery, season, or gear type closures when a quota has been projected to have been attained. The Secretary will publish a single notice in the *Federal Register* making the action effective.

B. Notice Actions Requiring at Least One Council Meeting and One *Federal Register* Notice

These include all management actions other than automatic actions, which are either nondiscretionary or for which the scope of probable impacts has been previously analyzed.

These actions are intended to have temporary effect, and the expectation is that they will need frequent adjustment. They may be recommended at a single Council meeting, although the Council will provide as much advance information to the public as possible concerning the issues it will be considering at its decision meeting. The primary examples are those inseason management actions defined as routine according to the criteria in Section 6.2.1. These include, but are not limited to, trip landing and frequency limits and size limits for all commercial gear types and closed seasons for any groundfish species in cases where protection of an overfished or depleted stock is required and bag limits, size limits, time/area closures, boat limits, hook limits, and dressing requirements for all recreational fisheries. Previous analysis must have been specific as to species and gear type before a management measure can be defined as routine and acted on at a single Council meeting. If the recommendations are approved, the Secretary ~~will~~ may waive for good cause the requirement for prior notice and comment in the *Federal Register* and will publish a single notice in the *Federal Register* making the action effective. This category of actions presumes the Secretary will find that the need for swift implementation and the extensive notice and opportunity for comment on these types of

measures, along with the Council already having analyzed the scope of their impacts, will serve as good cause to waive the need for additional prior notice and comment in the *Federal Register*.

C. Management Measures Rulemaking For Actions Developed Through the Three-Council-Meeting Biennial Specifications Process and Two *Federal Register* Rules

These include (1) management action developed through the biennial specifications process; (2) management measures being classified as routine; or (3) trip limits that vary by gear type, closed seasons or areas, and in the recreational fishery, bag limits, size limits, time/area closures, boat limits, hook limits, and dressing requirements the first time these measures are used. Examples include: changes to or imposition of gear regulations; imposition of landings limits, frequency limits, or limits that differ by gear type; closed areas or seasons used for the first time on any species or species group or gear type. The Council will develop and analyze the proposed management actions over the span of at least two Council meetings (usually April and June) and provide the public advance notice and opportunity to comment on both the proposals and the analysis prior to and at the second Council meeting. If a management measure is designated as routine under this procedure, specific adjustments of that measure can subsequently be announced in the *Federal Register* by notice as described in the previous paragraphs. The Secretary will publish a proposed rule in the *Federal Register* with an appropriate period for public comment followed by publication of a final rule in the *Federal Register*.

The three-Council-meeting process refers to two decision meetings. The Council will develop proposed harvest specifications during the first meeting (usually November). They will finish drafting harvest specifications and develop the management measures during the second meeting (usually April). Finally, at the third meeting, the Council will make final recommendations to the Secretary on the complete harvest specifications and management measures biennial management package (usually June). For the Council to have adequate information to identify proposed management measures for public comment at the first management measures meeting, the identification of issues and the development of proposals normally must begin at a prior Council meeting.

D. Full Rulemaking For Actions Normally Requiring at Least Two Council Meetings and Two *Federal Register* Rules (Regulatory Amendment)

These include any proposed management measure that is highly controversial or any measure that directly allocates the resource. These also include management measures that are intended to have permanent effect and are discretionary, and for which the impacts have not been previously analyzed. Full rulemakings will normally use a two-Council-meeting process, although additional meetings may be required to fully develop the Council's recommendations on a full rulemaking issue. Regulatory measures to implement an FMP amendment will be developed through the full rulemaking process. The Secretary will publish a proposed rule in the *Federal Register* with an appropriate period for public comment followed by publication of a final rule in the *Federal Register*.

Council-recommended management measures addressing a resource conservation issue must be based upon the identification of a point of concern through that decision-making framework, consistent with the specific procedures and criteria listed in Section 6.2.2.

Council-recommended management measures addressing social or economic issues must be consistent with the specific procedures and criteria described in Section 6.2.3.

Council-recommended changes to habitat protection measures must be consistent with the specific procedures and criteria described in Section 6.2.4.

6.2.1 Routine Management Measures

Routine management measures are those that the Council determines are likely to be adjusted on an annual or more frequent basis. The Council will classify measures as routine through either the specifications and management measures or rulemaking processes (C. or D. above). In order for a measure to be classified as routine, the Council will determine that the measure is appropriate to address the issue at hand and may require further adjustment to achieve its purpose with accuracy.

As in the case for all proposed management measures, prior to initial implementation as routine measures, the Council will analyze the need for the measures, their impacts, and the rationale for their use. Once a management measure has been classified as routine through one of the two rulemaking procedures outlined above, it may be modified thereafter through the single meeting notice procedure (B. above) only if (1) the modification is proposed for the same purpose as the original measure, and (2) the impacts of the modification are within the scope of the impacts analyzed when the measure was originally classified as routine. The analysis of impacts need not be repeated when the measure is subsequently modified if the Council determines that they do not differ substantially from those contained in the original analysis. The Council may also recommend removing a routine classification.

Experience gained from management of the Pacific Coast groundfish fishery indicates that certain measures usually require modification on a frequent basis to ensure that they meet their stated purpose with accuracy. For commercial fisheries, these measures are trip landing limits and trip frequency limits, including cumulative limits, and notification requirements. They have been applied to the commercial fishery either to stretch the duration of the fishery, so as not to disturb traditional fishing and marketing patterns; to reduce discards and waste; or to discourage targeted fishing while allowing small incidental catches when attainment of a harvest guideline or quota is imminent. In cases where protection of an overfished or depleted stock is required, the Council may impose limits that differ by gear type, or establish closed areas or seasons. These latter two measures were not historically imposed through the annual management cycle (now biennial) because of their allocative implications. However, this additional flexibility has become necessary to allow the harvest of healthy stocks as much as possible while protecting and rebuilding overfished and depleted stocks, and equitably distributing the burdens of rebuilding among sectors. The first time a differential trip limit or closed season is to be imposed in a fishery, it must be imposed during the biennial management cycle (with the required analysis and opportunity for public comment) and subsequently may be modified inseason through the routine adjustment process.

For recreational fisheries, bag limits, size limits, time/area closures, boat limits, hook limits, and dressing requirements may be applied to particular species, species groups, sizes of fish and gear types. For the recreational fishery, bag and size limits have been imposed to spread the available catch over a large number of anglers, in order to avoid waste, and to provide consistency with state regulations.

Routine management measures are also often necessary to meet the varied and interwoven mandates of the Magnuson-Stevens Act and FMP. These mandates include: preventing overfishing and rebuilding overfished species in a manner consistent with rebuilding plans, reducing bycatch, allowing the harvest of healthy stocks as much as possible while protecting and rebuilding overfished and depleted stocks, and equitably distributing the burdens of rebuilding among the sectors.

Any measure designated as routine for a particular species, species group, or gear type may not be treated as routine for a different species, species group, or gear type without first having been classified as routine. Each year, the SAFE document will list all measures that have been designated as routine.

The Council will conduct a continuing review of landings of those species for which harvest guidelines, quotas, OYs or specific routine management measures have been implemented and will make projections of the landings at various times throughout the year. If in the course of this review it becomes apparent that the rate of landings is substantially different than anticipated, and that the current routine management measures will not achieve harvest management objectives, the Council may recommend inseason adjustments to those measures. Such adjustments may be implemented through the single-meeting notice procedure (B. above.)

Routine Management Measures as of January 1, 2005:

Commercial limited entry and open access fisheries:

Trip landing and frequency limits, size limits, for all gear types may be imposed: to extend the fishing season; to minimize disruption of traditional fishing and marketing patterns; to reduce discards; to discourage target fishing while allowing small incidental catches to be landed; to protect overfished species; to allow small fisheries to operate outside the normal season; and, for the open access fishery only, to maintain landings at the historical proportions during the 1984-88 window period.

Trip landing and frequency limits have been designated as routine for the following species or species groups: black rockfish, blue rockfish, bocaccio, canary rockfish, chilipepper rockfish, cowcod, darkblotched rockfish, Pacific ocean perch, shortbelly rockfish, splitnose rockfish, widow rockfish, yelloweye rockfish, yellowtail rockfish, minor nearshore rockfish or shallow and deeper minor nearshore rockfish, shelf or minor shelf rockfish, and minor slope rockfish; DTS complex, which is composed of Dover sole, sablefish, shortspine thornyheads, and longspine thornyheads, both as a complex and for the species within the complex; arrowtooth flounder, English sole, petrale sole, Pacific sanddabs, rex sole, and the flatfish complex, which is composed of those species plus any other FMP flatfish species; Pacific whiting; lingcod; cabezon; and "other fish" as a complex consisting of all groundfish species listed in the FMP and not otherwise listed as a distinct species or species group.

Size limits have been designated as routine for sablefish and lingcod.

Trip landing and frequency limits that differ by gear type and closed seasons may be imposed or adjusted on a biennial or more frequent basis for the purpose of rebuilding and protecting overfished or depleted stocks. To achieve the rebuilding of an overfished or depleted stock, a sector or sectors of the primary Pacific whiting may be closed if a total catch limit of an overfished species has been designated for the whiting fishery and that total catch limit is reached before the sector's whiting allocation is reached. Total catch limits in the primary Pacific whiting fishery may be established or adjusted as routine management measures.

Recreational fisheries all gear types:

Routine management measures for all groundfish species, separately or in any combination, include: bag limits, size limits, time/area closures, boat limits, hook limits, and dressing requirements. All routine management measures on recreational fisheries are intended to keep landings within the harvest levels announced by NMFS, to rebuild and protect overfished or depleted species, and to maintain consistency with State regulations, and for the other purposes set forth in this section.

Bag limits may be imposed to spread the available catch over a large number of anglers; to protect and rebuild overfished species; to avoid waste.

Size limits may be imposed to protect juvenile fish; to protect and rebuild overfished species; to enhance the quality of the recreational fishing experience.

Season duration restrictions may be imposed to spread the available catch over a large number of anglers; to protect and rebuild overfished species; to avoid waste; to enhance the quality of the recreational fishing experience.

All fisheries, all gear types:

Depth-based management measures, particularly the setting of closed areas known as Groundfish Conservation Areas may be imposed on any sector of the groundfish fleet using specific boundary lines that approximate depth contours with latitude/longitude coordinates. Depth-based management measures and the setting of closed areas may be used to protect and rebuild overfished stocks.

The current list of routine management measures is published in federal regulations at 50 CFR 660.370.

6.2.2 Resource Conservation Issues—The Points of Concern Framework

[6.2.2 Resource Conservation Issues—The Points of Concern Framework]

The points of concern process is the Council's second major tool (along with setting harvest levels) in exercising its resource stewardship responsibilities. The Council developed the points of concern criteria to assist it in determining when a focused review on a particular species or species group is warranted, which might result in the need to recommend the implementation of specific management measures to address the resource conservation issue. This process is intended to foster a continuous and vigilant review of the Pacific Coast groundfish stocks and fishery to prevent unintended overfishing or other resource damage. To facilitate this process, a Council-appointed management team (the Groundfish Management Team [GMT] or other entity) will monitor the fishery throughout the year, taking into account any new information on the status of each species or species group. By this means they will identify resource conservation issues requiring a management response. The Council is authorized by this FMP to act based solely on evidence that one or more of these points of concern criteria has been met. This allows the Council to respond quickly and directly to a resource conservation issue. In conducting this review, the GMT or other entity will use the most current catch, effort, and other relevant data from the fishery.

In the course of the continuing review, a point of concern occurs when any one or more of the following is ~~found~~ one or more of the following situations occurs or is expected to occur:

1. Catch for the calendar year is projected to exceed the best current estimate of acceptable biological catch (ABC) for those species for which an OY, harvest guideline or quota is not specified.
2. Catch for the calendar year is projected to exceed the current OY, harvest guideline or quota.
3. Any change in the biological characteristics of the species or species complex is discovered, such as changes in age composition, size composition, and age at maturity.
4. Exploitable biomass or spawning biomass is below a level expected to produce MSY for the species/species complex under consideration.
5. Recruitment is substantially below replacement level.
6. Estimated bycatch of a species or species group increases substantially above previous estimates, or there is information that abundance of a bycatch species has declined substantially.
7. Impacts of fishing gear on EFH are discovered and modification to gear or fishing regulations could reduce those impacts.

Once a point of concern is identified, the GMT will evaluate current data to determine if a resource

conservation issue exists and will provide its findings in writing at the next scheduled Council meeting. If the GMT determines a resource conservation issue exists, it will provide its recommendation, rationale, and analysis for the appropriate management measures that will address the issue.

In developing its recommendation for management action, the Council will choose an action from one or more of the ~~following categories which include~~ categories listed below, although they may also identify other necessary measures. These categories cover the types of management measures most commonly used to address resource conservation issues:

- Harvest guidelines
- Quotas
- Cessation of directed fishing (~~foreign, domestic or both~~) on the identified species or species group with appropriate allowances for incidental harvest of that species or species group
- Size limits
- Landing limits
- Trip frequency limits
- Area or subarea closures
- Time closures
- Seasons
- Gear limitations, which include, but are not limited to, definitions of legal gear, mesh size specifications, codend specifications, marking requirements, and other gear specifications as necessary.
- Observer or other monitoring coverage
- Reporting requirements
- Permits
- ~~Other necessary measures~~

~~Direct allocation of the resource between different segments of the fishery is, in most cases, not the preferred response to a resource conservation issue.~~ Council recommendations to directly allocate the resource will be developed according to the criteria and process described in Section 6.2.3, the socioeconomic framework.

After receiving the GMT's report, the Council will take public testimony and, if appropriate, will recommend management measures to the NMFS Regional Administrator, accompanied by supporting rationale and analysis of impacts. The Council's analysis will include a description of (a) how the action will address the resource conservation issue, consistent with the objectives of the FMP; (b) likely impacts on other management measures, other fisheries, and bycatch; (c) economic impacts, particularly the cost to the commercial and recreational segments of the fishing industry; and (d) impacts on fishing communities.

The NMFS Regional Administrator will review the Council's recommendation and supporting information and will follow the appropriate implementation process described in Section 6.2, depending on the amount of public notice and comment provided by the Council and the intended permanence of the management action. If the Council anticipates that the recommended measures will be adjusted frequently, it may classify them as routine through the appropriate process described in Section 6.2.1.

If the NMFS Regional Administrator does not concur with the Council's recommendation, the Council will be notified in writing of the reasons for the rejection.

Nothing in this section is meant to derogate from the authority of the Secretary to take emergency action under Section 305(c) of the Magnuson-Stevens Act.

6.2.3 Non-biological Issues—The Socioeconomic Framework

From time to time, non-biological issues may arise that require the Council to recommend management actions to address certain social or economic issues in the fishery. Resource allocation, seasons, or landing limits based on market quality and timing, safety measures, and prevention of gear conflicts make up only a few examples of possible management issues with a social or economic basis. In general, there may be any number of situations where the Council determines that management measures are necessary to achieve the stated social and/or economic objectives of the FMP.

Either on its own initiative or by request, the Council may evaluate current information and issues to determine if social or economic factors warrant imposition of management measures to achieve the Council's established management objectives. Actions that are permitted under this framework include all of the categories of actions authorized under the points of concern framework with the addition of direct resource allocation.

If the Council concludes that a management action is necessary to address a social or economic issue, it will prepare a report containing the rationale in support of its conclusion. The report will include the proposed management measure, a description of other viable alternatives considered, and an analysis that addresses the following criteria: (a) how the action is expected to promote achievement of the goals and objectives of the FMP; (b) likely impacts on other management measures, other fisheries, and bycatch; (c) biological impacts; (d) economic impacts, particularly the cost to the fishing industry; (e) impacts on fishing communities; and (f) how the action is expected to accomplish at least one of the following, or any other measurable benefit to the fishery:

1. Enable a quota, harvest guideline, or allocation to be achieved.
2. Avoid exceeding a quota, harvest guideline, or allocation.
3. Extend domestic fishing and marketing opportunities as long as practicable during the fishing year, for those sectors for which the Council has established this policy.
4. Maintain stability in the fishery by continuing management measures for species that previously were managed under the points of concern mechanism.
5. Maintain or improve product volume and flow to the consumer.
6. Increase economic yield.
7. Improve product quality.
8. Reduce anticipated bycatch and bycatch mortality.
9. Reduce gear conflicts, or conflicts between competing user groups.
10. Develop fisheries for underutilized species with minimal impacts on existing domestic fisheries.
11. Increase sustainable landings.
12. ~~Increase~~ Reduce fishing ~~efficiency~~ capacity.
13. Maintain data collection and means for verification.
14. Maintain or improve the recreational fishery.
15. ~~Any other measurable benefit to the fishery.~~

The Council, following review of the report, supporting data, public comment, and other relevant information, may recommend management measures to the NMFS Regional Administrator accompanied by relevant background data, information, and public comment. The recommendation will explain the urgency in implementing the measure(s), if any, and reasons therefore.

The NMFS Regional Administrator will review the Council's recommendation, supporting rationale, public comments, and other relevant information, and, if it is approved, will undertake the appropriate method of implementation. Rejection of the recommendation will be explained in writing.

The procedures specified in this chapter do not affect the authority of the Secretary to take emergency regulatory action as provided for in Section 305(c) of the Magnuson-Stevens Act if an emergency exists involving any groundfish resource, or to take such other regulatory action as may be necessary to discharge the Secretary's responsibilities under Section 305(d) of the Magnuson-Stevens Act.

If conditions warrant, the Council may designate a management measure developed and recommended to address social and economic issues as a routine management measure, provided that the criteria and procedures in Section 6.2.1 are followed.

Quotas, including allocations, implemented through this framework will be set for one-year periods and may be modified inseason only to reflect technical corrections to an ABC. (In contrast, quotas may be imposed at any time of year for resource conservation reasons under the points of concern mechanism.)

6.2.4 The Habitat Conservation Framework

In order to protect EFH from the adverse effects of fishing, the Council has identified areas that are closed to bottom trawling (see Sections 6.8 and 7.4). These areas are described in federal regulations and may be modified through the full rulemaking process as described under Section 6.2 D. The Habitat Committee, or another committee designated by the Council, may at any time review the areas currently closed to bottom trawling and recommend to the Council the elimination of existing areas or the addition of new areas, or modification of the extent and location of existing areas. If the committee is unable to make recommendations based on consensus, it may do so by majority vote of its members. At their discretion, the committee may consider requests for such review from members of the public, including non-governmental organizations, or state, federal, or other governmental entities. The committee will respond to requests for review from the Council or its advisory bodies. In making its recommendation to the Council, the committee should consider, but is not limited to considering, the best available scientific information about:

1. The importance of habitat types to any groundfish FMU species for their spawning, breeding, feeding, or growth to maturity.
2. The presence and location of important habitat (as defined immediately above).
3. The presence and location of habitat that is vulnerable to the effects of bottom trawl fishing.
4. The presence and location of unique, rare, or threatened habitat.
5. The socioeconomic and management-related effects of closures, including changes in the location and intensity of bottom trawl fishing effort, the displacement or loss of revenue from fishing, and social and economic effects to fishing communities attributable to the location and extent of closed areas.

When making their recommendation to the Council, the committee may also include in their recommendations proposed changes in the designation of HAPCs consistent with the proposed modification of the location and extent of areas closed to bottom trawling. For example, if a current closed area, which is also identified as an HAPC, is recommended for elimination, the committee may recommend whether or not to retain the HAPC designation. Any such recommendation with respect to an HAPC would trigger the process for the modification of HAPCs (by FMP amendment) described in Section 7.3.2. Upon receipt of a recommendation from the committee, the Council will decide whether to begin the rulemaking process described in Section 6.2 D for establishing, adjusting, or removing discretionary management measures intended to have a permanent effect. Any such changes must be consistent with the recommendations made

||| by the committee.

6.2.5 Indian Treaty Rights

[FMP Appendix (11.7.6) Indian Treaty Rights]

Treaties with a number of Pacific Northwest Indian tribes reserve to those tribes the right of taking fish at their usual and accustomed fishing grounds and stations (U & A) in common with other citizens of the United States. NMFS has determined that the tribes that have U & A in the area managed by this FMP are the Makah, Hoh, and Quileute Tribes, and the Quinault Indian Nation. Several tribal fisheries exist for species covered by the FMP. The Federal government has accommodated these fisheries through a regulatory process, found at 50 CFR 660.324. Until such time as tribal treaty rights are finally adjudicated or the regulatory process is modified or repealed, the Council will continue to operate under that regulatory process to provide recommendations to the Secretary on levels of tribal groundfish harvest.

6.3 Allocation

[6.1.10 Allocation]

Allocation is the apportionment of an item for a specific purpose or to a particular person or group of persons. Allocation of fishery resources may result from any type of management measure, but is most commonly a numerical quota or harvest guideline for a specific gear or fishery sector. Most fishery management measures allocate fishery resources to some degree, because they invariably affect access to the resource by different fishery sectors by different amounts. These allocative impacts, if not the intentional purpose of the management measure, are considered to be indirect or unintentional allocations. Direct allocation occurs when numerical quotas, harvest guidelines, or other management measures are established with the specific intent of affecting a particular group's access to the fishery resource.

Fishery resources may be allocated to accomplish a single biological, social or economic objective, or a combination of such objectives. The entire resource, or a portion, may be allocated to a particular group, although the Magnuson-Stevens Act requires that allocation among user groups be fair and equitable, reasonably calculated to promote conservation, and determined in such a way that no group, person, or entity receives an undue excessive share of the resource. The socioeconomic framework described in Section 6.2.3 provides criteria for direct allocation. Allocative impacts of all proposed management measures should be analyzed and discussed in the Council's decision-making process.

[6.2.3.1 Allocation]

In addition to the requirements described in Section 6.2.3, the Council will consider the following factors when intending to recommend direct allocation of the resource.

1. Present participation in and dependence on the fishery, including alternative fisheries.
2. Historical fishing practices in, and historical dependence on, the fishery.
3. The economics of the fishery.
4. Any consensus harvest sharing agreement or negotiated settlement between the affected participants in the fishery.
5. Potential biological yield of any species or species complex affected by the allocation.
6. Consistency with the Magnuson-Stevens Act national standards.
7. Consistency with the goals and objectives of this FMP.

The modification of a direct allocation cannot be designated as routine unless the specific criteria for the modification have been established in the regulations.

6.4 Standardized Total Catch Reporting and Compliance Monitoring Program

[6.3.2 Standardized Reporting Methodology]

Fishery managers participating in the Council process need accurate estimates of total fishing mortality. Total fishing mortality data are needed to both set accurate harvest specifications and management measures and to adjust management measures inseason so that OYs may be achieved, but not exceeded. Various state, federal, and tribal catch monitoring systems are used in West Coast groundfish management. These are coordinated through the Pacific States Marine Fisheries Commission (PSMFC). PacFIN (Pacific Fisheries Information Network) is the commercial catch monitoring database, and RecFIN (Recreational Fishery Information Network) is the database for recreational fishery catch monitoring.

Total catch has two major components: fish that are retained, landed, and sold or kept for personal use and fish that are discarded, either at sea or on shore.² (For obvious economic reasons, most undesired fish are discarded at sea.) This discarded component is what the Magnuson-Stevens Act defines as bycatch.³ Total catch and total fishing mortality may differ because some bycatch may survive capture and subsequent discard, or release. Bycatch mortality varies depending on the physiology of a particular species, the type of fishing gear used, and how fish are handled from the time of capture until they are released back into the water.

Commercial and recreational groundfish fisheries have been managed through a variety of measures intended to limit catch to the level established by an OY. These include cumulative landing limits for commercial fisheries and bag limits for recreational fisheries (see Section 6.7). When these measures are less restrictive, few constraints are imposed on fisheries and fish are primarily discarded for economic reasons. (In recreational fisheries, an economic discard would be a personal assessment of the desirability of a particular fish or fish species). When one stock has a comparatively low landing or bag limit in a multispecies fishery, because it is depleted for example, fish may be discarded once the limit is reached in order to continue fishing for other species. Under these conditions bycatch can be a large portion of total catch and total fishing mortality. With a standardized reporting methodology, managers are better able to track bycatch both inseason and cumulatively, information that is essential to developing management programs to reduce bycatch and bycatch mortality. Therefore, maintaining a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, in addition to being required by the Magnuson-Stevens Act (16 U.S.C. 1853(a)(11)), is an important management task. This FMP meets that requirement through a standardized reporting methodology not just for the amount and type of bycatch occurring in the fishery, but for total catch (landed catch plus bycatch mortality) in the fishery.

In order to better monitor and manage bycatch, the Council supports accounting for total catch by specified fishery sectors. Beginning with the 2003 fishing year, as part of its evaluation of proposed management measures, the Council has been projecting total catches by fishery sector. Actual landings and estimated bycatch have also been categorized by fishery sector. Methods to accurately estimate sector- and species-specific total catch are needed to support the Council's bycatch mitigation program (Section 6.5). The Council relies on a combination of state, tribal, and federal reporting and monitoring programs to determine total catch. NMFS is responsible for evaluating the adequacy of Federal standardized reporting

² The Magnuson-Stevens Act further defines the term fish to mean "finfish, mollusks, crustaceans, and all other forms of marine animal and plant life other than marine mammals and birds" 16 U.S.C. 1802(12).

³ Using the term bycatch has led to considerable confusion, because many people use the term synonymously with the concept of incidental catch, or that part of the catch which is not the target of the fishery. In single species fisheries, incidental catch and discards may be largely coincident. But in multispecies fisheries there may be multiple targets, and species that might be considered incidental are commonly retained, depending on the market and regulatory environment. In this FMP, the Magnuson-Stevens Act definition of bycatch is used, as distinct from incidentally-caught species.

methodologies for assessing the amount and type of bycatch occurring in a fishery. In 2004, NMFS published *Evaluating Bycatch: A National Approach to Standardized Bycatch Monitoring Programs*, which describes Federal standardized bycatch reporting methodologies and evaluates the adequacies of these methodologies, including those used for the West Coast groundfish fisheries. Federal reporting requirements in this fishery are described below.

6.4.1 Total Catch Reporting Methodology

6.4.1.1 Monitoring Total Catch At Sea – Observer and Electronic Monitoring Programs

[6.5.1.2 Observers]

The Magnuson-Stevens Act defines the term “observer” as “any person required or authorized to be carried on a vessel for conservation and management purposes by regulations or permits under this Act.” The Act also sets out guidelines for vessels carrying observers, observer training requirements, and observer status as federal employees.

All fishing vessels operating in this management unit, which includes catcher/processors, at-sea processors, and those vessels that harvest in the Washington, Oregon, and California area and land in another area, may be required to accommodate an observer or ~~video~~ electronic-monitoring system for the purpose of collecting scientific data or verifying landings and discard used for scientific data collection. An observer program will be considered only for circumstances where other data collection methods are deemed insufficient for management of the fishery. Implementation of any observer program or electronic monitoring will be in accordance with appropriate federal procedures, including economic analysis and public comment. Any federal program that requires the collection of information from fishery participants is also subject to the requirements of the Paperwork Reduction Act.

The Regional Administrator will implement an observer program through a Council-approved federal regulatory framework. Details of how observer coverage will be distributed across the West Coast groundfish fleet will be described in an observer coverage plan. NMFS will publish an announcement of the authorization of the observer program and description of the observer coverage plan in the *Federal Register*. Development and implementation of an observer program is done through the full rulemaking process at 6.2, D.

Electronic monitoring is an automated alternative to some human data collection systems. Electronic monitoring equipment can provide accurate, timely, and verifiable fisheries data at a lower cost than that provided by an at-sea observer. Electronic monitoring is an integrated assortment of electronic components combined with a software operating system. An electronic monitoring system typically includes one or more video cameras, a CPU with removable hard drive, and software that can integrate data from other components of a vessel’s electronic equipment. The system autonomously logs video and vessel sensor data during the fishing trip without human intervention. When the vessel has completed its fishing operations and returned to port, the video and other data are transferred to a separate computer system for analysis. Video records are typically reviewed by human samplers on shore, but electronic techniques are being developed to automate some of this activity. Electronic monitoring has been tested in various Canadian fisheries and has successfully addressed specific fishery monitoring objectives. NOAA Fisheries began testing electronic monitoring equipment in the 2004 shore-based whiting fishery, in order to determine whether a full-retention program could be adequately monitored by an electronic monitoring system. This FMP authorizes the use of electronic monitoring programs for appropriate sectors of the fishery. Development and implementation of an electronic monitoring program would be done through the full rulemaking process at 6.2, D.

There may be a priority need for observers on at-sea processing vessels to collect data normally collected at

shore-based processing plants. Certain information for management of the fishery may be obtained from logbooks and other reporting requirements, but the collection of some types of data would be too onerous for some fishermen to collect. Processing vessels must be willing to accommodate onboard observers and may be required to verify that they are accommodating observers prior to issuance of any required federal permits.

6.4.1.2 Commercial Fisheries

The total catch accounting methodology for commercial groundfish fisheries has two main components: monitoring landed catch through reports by fish processors (fish receiving tickets) and at-sea observer programs to estimate bycatch. Because fishery observers are usually placed aboard only a fraction of the vessels in a given sector, their observations must be expanded using statistical methods in order to estimate total catch across a sector. For some fishery sectors there may not be any direct observation or reporting of bycatch; in such cases standard bycatch rates, developed using the best scientific information, may be used to estimate bycatch. When combined with information on landed catch, this gives an estimate of total catch. The Council uses total catch information in inseason management to determine the relationship between catch at a given point and an annual OY. Management measures within a given year may be adjusted based on total catch information in order to prevent total catch from exceeding OY levels. Fishery managers also use historic total catch data in stock assessments and to develop future harvest specifications and management measures.

[Section 6.5.2.4 Reporting Requirements]

The owner or operator of any vessel that retains fish harvested in the area managed by this FMP whose port of landing is outside the management area may be required to report those catches in a timely manner through a federal reporting program. They also may be required to submit a completed fish landing ticket from Washington, Oregon, or California, or an equivalent document containing all of the information required by the state on that fish ticket.

Monitoring Total and Landed Catch

Federal regulations require fishers to sort all species with trip limits, harvest guidelines, or OYs, including all overfished species. The states also require limited entry groundfish trawl fishermen to maintain logbooks to record the start and haul locations, time, and duration of trawl tows, as well as the total catch by species market category (i.e., those species and complexes with sorting requirements). Landings are recorded on state fish receiving tickets. Fishtickets are designed by the individual states, but there is an effort to coordinate record-keeping requirements with state and federal managers. Catch weight by sorted species category, area of catch, vessel identification number, and other data elements are required on fishtickets. Landings are also sampled in port by state personnel, who collect species composition data, otoliths for ageing, lengths, and other biological data. A suspension of at-sea sorting requirements coupled with full retention of catch is allowed in the whiting fishery under an EFP. Amendment 10 to the FMP authorized this suspension of at-sea reporting requirements through a rulemaking, rather than just through an EFP.

Landings, logbook data, and state port sampling data are reported inseason to the PacFIN database, which is managed by the PSMFC. The GMT and PSMFC manage the Quota Species Monitoring (QSM) dataset reported in PacFIN. All landings of groundfish stocks of concern (overfished stocks and stocks below B_{MSY}) and target stocks and stock complexes in West Coast fisheries are tracked in QSM reports of landed catch. QSM reports also include bycatch (discard) estimates, allowing them to be used to track total catch. The GMT recommends prescribed landing limits and other inseason management measures to the Council to attain, but not exceed, total catch OYs of QSM species. Stock and complex landing limits are modified inseason to control total fishing-related mortality; QSM reports and landed catch forecasts are used to control

the landed catch component.

Groundfish Observer Programs

Vessels participating in the at-sea Pacific whiting fishery have been carrying observers voluntarily since 1991. NMFS made observer coverage mandatory for at-sea processors in July 2004 (65 FR 31751). These provisions have not only given fishery managers the tools necessary to allow the at-sea Pacific whiting program to operate efficiently while meeting management goals, but have also provided scientists, through the observer coverage, an extensive amount of information on bycatch species in this fishery.

NMFS first implemented the West Coast Groundfish Observer Program (WCGOP) in August 2001, placing observers aboard commercial groundfish vessels to monitor discards. By regulation (50 CFR 660.360), all vessels that participate in commercial groundfish fisheries must carry an observer when notified to do so by NMFS or its designated agent. These observers monitor and record catch data, including species composition of retained and discarded catch. Observers also collect biological data, such as fish length, sex, and weight. The program currently deploys observers coastwide on the permitted trawl and fixed-gear groundfish fleet, as well as on some vessels that are part of the open-access groundfish fleet. Observers monitor between 10% and 20% of the catch, as a proportion of total landings. Given the skewed distribution of bycatch in West Coast groundfish fisheries, many observations in each sampling strata (gear type and area) are needed to estimate representative bycatch rates.

The FMP does not currently authorize foreign fisheries for groundfish. According to the Magnuson-Stevens Act, observers would be required on any foreign vessels operating in the Exclusive Economic Zone (EEZ).

6.4.1.3 Recreational Fisheries

Recreational catch is monitored by the states as it is landed in port. These data are compiled by the PSMFC in the RecFIN database. The types of data compiled in RecFIN include sampled biological data, estimates of landed catch plus discards, and economic data.

The Marine Recreational Fisheries Statistical Survey (MRFSS) was an integral part of the RecFIN program until recently, and was the principle program used to estimate effort and catches of the recreational fisheries. The MRFSS used field-intercept surveys to estimate catch and a random phone survey of coastal populations to estimate effort. The results of these two surveys were combined in the RecFIN database to estimate total fishing effort, fishing mortality, and other estimates useful for management. MRFSS was not designed to estimate catch and effort at the level of precision needed for inseason management or assessment. Thus, while MRFSS continues to be used as a nationwide statistical tool for assessing national recreational fisheries data, it is no longer relied upon to support inseason West Coast groundfish management. In recent years, the three states, NMFS, and PSMFC have been revamping the way that West Coast recreational fisheries data are collected and estimates are generated so that the data system better supports inseason management. Each state has either improved upon existing sampling projects, such as Washington's Ocean Sampling Program, and Oregon's Ocean Recreational Boat Survey and Shore and Estuary Boat Survey, or developed new sampling programs, such as California's California Recreational Fisheries Survey. Data collected by these state sponsored programs are submitted to RecFIN, and forms the basis for estimating catch and effort. All three states have accelerated their reporting rates into RecFIN. Beginning in 2005, the states plan to provide recreational fisheries data within one month of the fishing activity; for example, fisheries data through the end of January would be available at the end of February.

The Washington Department of Fish and Wildlife's Ocean Sampling Program (OSP) generates catch and

effort estimates for the recreational boat-based groundfish fishery, which are provided to Pacific States Marine Fisheries Commission (PSMFC) and incorporated directly into RecFIN. The OSP provides catch in total numbers of fish, and also collects biological information on average fish size, which is provided to RecFIN to enable conversion of numbers of fish to total weight of catch. Boat egress from the Washington coast is essentially limited to four major ports (Neah Bay, La Push, Westport, and Ilwaco,) which enables a sampling approach to strategically address fishing effort from these ports. Effort estimates are generated from exit-entrance counts of boats leaving coastal ports while catch per effort is generated from angler intercepts at the conclusion of their fishing trip. The goal of the program is to provide information to RecFIN on a monthly basis with a one-month delay to allow for inseason estimates.

The Oregon Department of Fish and Wildlife's (ODFW) Ocean Recreational Boat Survey (ORBS) is responsible for collecting both effort and catch data for the ocean boat portion of the recreational fishery in Oregon. Samplers are stationed in 12 major ports: Astoria, Garibaldi, Pacific City, Depoe Bay, Newport, Florence, Winchester Bay, Charleston, Bandon, Port Orford, Gold Beach, and Brookings. Samplers collect effort information by either conducting exit/entrance counts in the larger ports, or conducting trailer/slip counts in the smaller ports. Upon a vessel's return, samplers examine landed catch, collect released information, and collect biological data used to calculate the average size of landed fish by species. The ORBS submits effort and catch estimates to Pacific States Marine Fisheries Commission's (PSMFC) RecFIN program. The ODFW, in cooperation with PSMFC has developed the Shore and Estuary Boat Survey (SEBS) in order to develop effort and catch estimates for the shore and estuary boat portions of Oregon's recreational fishery. Effort is determined using a license frame based phone survey. In addition, SEBS is responsible for collecting discard information from the Oregon ocean charter fleet. Samplers act as observers on charter vessels, enumerating releases by species, and taking lengths before fish are released. This information is used to calculate an average size of fish discarded in the recreational fishery.

The California Department of Fish and Game (CDFG), in cooperation with PSMFC, implemented the California Recreational Fisheries Survey (CRFS) in 2004. CRFS combines the prior MRFSS party/charter boat (PC) sampling program, the high-quality sampling methodology (for private recreational vessels) used by California's Ocean Salmon Project, and several new methodologies specifically designed for CRFS into a single, coordinated, statewide program. This program is designed to produce more timely and accurate catch and effort estimates than were available through the MRFSS program while continuing to provide the comprehensive coverage used in the MRFSS program for all recreational fisheries in both boat (private boats, rental boats and party/charter boats) and shore (pier, jetty, beach and bank) modes of fishing. CRFS employs the following methodologies for sampling these different modes of recreational fishing:

- Private and rental boats (PR) are divided into primary and secondary sampling sites. Primary sites are sampled using a public launch ramp access point survey for effort and catch at high use sites during daylight hours. These sites are defined as those where 90% or more of the catch of important species are landed. Secondary sites are sampled using a roving access point survey for effort and catch. These sites are defined as those sites in a particular month where less than 10% of the total catch of important species is landed.
- Man-made (MM) sites, composed of piers, jetties and breakwaters, are sampled using a roving access point survey for catch and effort.
- Beach and Bank (BB) sites are sampled using two surveys: a roving access point survey at publicly accessible beaches and banks during daylight hours for catch rates and an angler license database (ALD) telephone survey for all effort.
- Party and charter vessels (PC) are sampled using two surveys: a weekly telephone survey of all PC vessels for effort and on board sampling for catch.
- Estimates of private access and night fishing effort and catch for PR, MM and BB by trip type are derived using the ALD telephone survey for effort and catch rates from access point surveys for catch.

For all modes of fishing, samplers examine landed catch, collect released information and fishing location, and collect biological data used to calculate the average size of landed fish by species. In addition, samplers act as observers on charter vessels, enumerating releases by species, and taking lengths before fish are released. These data, along with effort information for all modes, are entered by PSMFC into the RecFIN database. Estimates of catch and effort then are generated by PSMFC staff and posted on the RecFIN website. These estimates are greatly improved over those from MRFSS, not only because of the improvements in sampling methodologies, but because of changes in sampling rates, reporting intervals, geographical resolution, and expansion processes. CRFS, which employs a sampling rate in excess of three times that from MRFSS, provides monthly estimates for six geographical regions in California that are expanded from species catch rates based upon trip types and stated target species.

6.4.2 Vessel Compliance Monitoring and Reporting Requirements

In addition to authorizing federal and state programs to collect total catch data, this FMP authorizes the collection of fisheries data needed for compliance monitoring. The following types of data may be collected through a regulatory program intended to ensure vessel compliance with fishery management measures:

[6.5.2.4 Reporting Requirements]

1. Vessel name.
2. Radio call sign.
3. Documentation number or federal permit number.
4. Company representative and telephone, fax, and/or telex number.
5. Vessel location including daily positions.
6. Check-in and check-out reports giving the time, date, location of the beginning or ending of any fishing activity.
7. Gear type.
8. Reporting area and period.
9. Duration of operation.
10. Estimated catch by species and area, species disposition (including discards, product type, and weights).
11. Product recovery ratios, products sold (in weight and value by species and product type, and if applicable, size or grade).
12. Any other information deemed necessary for management of the fishery.

Vessels also may be required to maintain and submit logbooks, accurately recording the following information in addition to the information listed above, and for a specified time period: daily and cumulative catch by species, effort, processing, and transfer information; crew size; time, position, duration, sea depth, and catch by species of each haul or set; gear information; identification of catcher vessel, if applicable; information on other parties receiving fish or fish products; and any other information deemed necessary.

Vessels may be required to inform a NMFS enforcement or U.S. Coast Guard office prior to landing or offloading any seafood product. Such vessels may also be required to report prior to departing the Washington, Oregon, and California management area with fish or fish products on board.

This FMP authorizes the use of vessel monitoring system (VMS) programs in order to improve compliance with area and/or season closures. VMS is a tool that is commonly used to monitor vessel activity in relationship to geographical defined management areas where fishing activity is restricted. VMS transceivers installed aboard vessels automatically determine the vessel's location and transmit that position to a processing center via a communication satellite. At the processing center, the information is validated and

analyzed before being disseminated for fisheries management, surveillance, and enforcement purposes. VMS transceivers document the vessel's position using Global Positioning System (GPS) satellites. Depending on the defined need, position transmissions can be made on a predetermined schedule or upon request from the processing center. VMS transceivers are designed to be tamper resistant. The vessel operator is unable to alter the signal or the time of transmission and in most cases the vessel operator is unaware of exactly when the unit is transmitting the vessel's position. VMS programs used to improve compliance in several fisheries with differing area and/or season closures may require the use of a declaration system. A declaration system in association with VMS requires fishery participants declare their intended fishing activity, allowing enforcement personnel to differentiate between vessels subject to differing area and/or season closures.

New regulatory requirements for the collection of fishery-related data would need to be implemented through the full rulemaking process detailed at Section 6.2, D. Any federal program that requires the collection of information from fishery participants is also subject to the requirements of the Paperwork Reduction Act.

6.5 Bycatch Mitigation Program

[6.3.3 Measures to Control Bycatch]

Unquantified bycatch increases management risk because harvest limits may be inadvertently exceeded. Regulatory-induced discards are inefficient because society does not benefit from fish with economic value that are discarded to meet regulatory requirements. Bycatch can also include protected species and organisms comprising ecologically important biogenic habitat. Thus, more generally, bycatch may have broader environmental effects. The Magnuson-Stevens Act requires FMPs to include conservation and management measures that, to the extent practicable, minimize bycatch and the mortality of unavoidable bycatch (16 U.S.C. 1853(a)(11)). FMPs may also be subject to bycatch reduction requirements under the ESA, the MMPA, the MBTA, and other federal laws. Federal guidance on assessing the practicability of a potential management program is found at 50 CFR 600.350.

Working with NMFS, the states, and the tribes, the Council uses a three-part strategy to meet the Magnuson-Stevens Act's bycatch-related mandates: (1) gather data through a standardized total catch reporting methodology; (2) use federal/state/tribal agency partners to assess these data through bycatch models that estimate when, where, and with which gear types bycatch of varying species occurs; and (3) develop management measures that minimize bycatch and bycatch mortality to the extent practicable. The FMP's total catch reporting methodology is described in Section 6.4.1. Bycatch models that assess observer and other data to estimate bycatch amounts occurring in the different sectors of the fishery are routinely reviewed through the Council's SSC and GMT as part of the Council's harvest specifications and management measures rulemaking process. These models are intended to continuously improve the Council's use of the best available scientific information on species-to-species catch ratios. This section describes the Council's bycatch mitigation program and the management measures intended to minimize bycatch and bycatch mortality.

6.5.1 Bycatch of Groundfish Species in Groundfish Fisheries

Groundfish bycatch in the groundfish fisheries includes both groundfish that are discarded for regulatory reasons, such as a vessel having achieved a trip limit for one species within an assemblage, and groundfish that are discarded for economic reasons, such as a vessel having taken more fish than can be stored in its hold, or having taken more of a particular species than is desired by a processor. The Council may initiate new and practicable management measures to reduce groundfish bycatch in the groundfish fisheries under either the harvest specifications and management measures rulemaking process (6.2, C.) or full rulemaking process (6.2, D.) It is usually through the harvest specifications development process that the Council is made aware of new data and analyses on groundfish bycatch and bycatch mortality rates. The Council manages its groundfish fisheries to allow targeting on more abundant stocks while constraining the total mortality of

overfished and precautionary zone stocks. For overfished stocks, measures to constrain total mortality are primarily intended to reduce bycatch of those stocks. The FMP defines stock status of overfished, precautionary zone, and more abundant stocks at Section 4.5. Management measures the Council has used to reduce total catch of overfished species are detailed for each species at 4.5.4. At Section 4.6, the FMP requires that landed catch OYs be reduced from total catch OYs to account for bycatch mortality.

The Council has all of the management measures detailed in Sections 6.5 – 6.10 at its disposal to manage directed catch and reduce bycatch of groundfish species in the groundfish fisheries. Because of the interaction among the various species and the regular incorporation of new information into the management system, the details of the specific measures will change over the years, or within years, based on the best available science. Management measures will be designed taking into account the co-occurrence ratios of target stocks with overfished stocks. To protect overfished species and minimize bycatch through reducing incidental catch of those species, the Council will particularly use, but is not limited to: catch restrictions detailed in Section 6.7 to constrain the catch of more abundant stocks that commingle with overfished species, in times and areas where higher abundance of overfished species are expected to occur; the appropriate time/area closures detailed in Section 6.8 and designed to prevent vessels from operating during times when or in areas where overfished species are most vulnerable to a particular gear type or fishery; and gear restrictions described in Section 6.6, where that gear restriction has been shown to be practicable in reducing overfished species incidental catch rates.

6.5.2 *Bycatch of Non-Groundfish Species in Groundfish Fisheries*

[6.3.1 Bycatch of Nongroundfish Species]

Certain non-groundfish species may be taken incidentally in fisheries targeting groundfish. This FMP authorizes management measures to minimize, to the extent practicable, the bycatch of non-groundfish species. Non-groundfish species subject to bycatch minimization measures may be marine fish species managed under another Council FMP, or marine animals or plants not managed with an FMP, yet subject to the protections of the ESA, the MMPA, the MBTA, or other federal laws.

Generally, the Council will initiate the process of establishing or adjusting management measures when a resource problem with a non-groundfish species is identified and it has been determined that groundfish fishing regulations would reduce the total impact on that species or stock. This would usually occur when a state or federal resource management agency (such as the U.S. Department of the Interior, NMFS, or state fishery agency) or the Council's Salmon Technical Team (STT) presents the Council with information substantiating its concern for a particular species. The Council will review the information and refer it to the Scientific and Statistical Committee (SSC), GMT, STT, or other appropriate technical advisory group for evaluation. If the Council determines, based on this review, that management measures may be necessary to prevent harm to a non-groundfish species facing conservation problems or to address requirements of the ESA, MMPA, other relevant federal natural resource law or policy, or international agreement, it may implement appropriate management measures in accordance with the procedures identified in Section 6.2. The intention of the measures may be to share conservation burdens while minimizing disruption of the groundfish fishery, but under no circumstances may the intention be simply to provide more fish to a different user group or to achieve other allocation objectives.

6.5.2.1 Endangered Species Act Species

Marine species protected under the ESA that are not otherwise protected under either the MMPA or the MBTA (see below) include various salmon and sea turtle species. Threatened and endangered Pacific salmon runs are protected by a series of complex regulations affecting marine and terrestrial activities. In the West Coast groundfish fisheries, management measures to reduce incidental salmon take have focused on the

Pacific whiting fisheries, which have historically encountered more salmon than the non-whiting groundfish fisheries. Salmon bycatch reduction measures include marine protected areas where Pacific whiting fishing is prohibited (See 6.8.4), an at-sea observer program intended to track whiting and incidental species take inseason (See 6.4.1.1), Sea turtles are rare in areas where groundfish fisheries are prosecuted and the incidental take of a sea turtle has not been documented in any directed groundfish fishery.

6.5.2.2 Marine Mammal Protection Act Species

Bycatch of marine mammals is addressed under the MMPA and its implementing regulations. Section 118 of the MMPA requires that NMFS place all commercial fisheries into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occur in each fishery. To implement this requirement, NMFS publishes a list of U.S. commercial fisheries and categorizes their effects on marine mammals. Directed West Coast groundfish fisheries have consistently been categorized as Category III fisheries, meaning that they are “commercial fisher[ies] determined by the [NMFS] Assistant Administrator to have a remote likelihood of, or no known incidental mortality and serious injury of marine mammals.”

6.5.2.3 Migratory Bird Treaty Act Species

Bycatch of seabirds is addressed under the MBTA and its implementing regulations. The MBTA implements various treaties and conventions between the U.S. and Canada, Mexico, Japan, and the former Soviet Union for the protection of migratory birds. Under the Act, taking, killing, or possessing migratory birds is unlawful. The U.S. Fish and Wildlife Service (FWS) is the federal agency responsible for management and protection of migratory birds, including seabirds. NMFS is required to consult with the FWS if fishery management plan actions may affect seabird species listed as endangered or threatened. In February 2001, NMFS adopted a National Plan of Action (NPOA) to Reduce the Incidental Take of Seabirds in Longline Fisheries. This NPOA contains guidelines that are applicable to the groundfish fisheries and would require seabird incidental catch mitigation if a significant problem is found to exist. In the limited entry groundfish longline fleet off the coast of Washington, Oregon, and California during September 2001 - October 2002, there were no incidental seabird takes documented by West Coast Groundfish Observers.

6.5.3 Measures to Reduce Bycatch and Bycatch Mortality

Over the life of the FMP, the Council has used a suite of measures to reduce bycatch and bycatch mortality in the groundfish fisheries. Early bycatch reduction measures concentrated on trawl net modifications intended to reduce the bycatch of juvenile groundfish (See Section 6.6.1). In 1993, the Council addressed concerns over potential bycatch of endangered or threatened salmon in the whiting fishery by imposing the Columbia River and Klamath River Conservation Zones (See Section 6.8.4). Since 2000, the Council has concentrated its bycatch reduction efforts on constraining total catch of overfished species through gear restrictions (See Section 6.6), catch restrictions (See Section 6.7), time/area closures (See Section 6.8), and effort restrictions (See 6.9). The Council and NMFS have also used permit restrictions and effort reduction programs (See 6.9) to reduce total and incidental catch in the groundfish fisheries. Effort reduction measures implemented in recent years include the sablefish endorsement and tier program for the limited entry fixed gear fleet and the vessel/permit buyback program for the limited entry trawl fleet.

Any of the measures specified in 6.5 through 6.10 may, where practicable, be used to reduce groundfish or non-groundfish bycatch in the groundfish fisheries. The Council will develop measures to reduce bycatch and bycatch mortality in accordance with the points of concern or the socioeconomic framework provisions of the FMP. The process for implementing and adjusting such measures may be initiated at any time. New bycatch reduction management measures would need to be developed through either the harvest specifications and management measures rulemaking process (6.2, C.) or the full rulemaking process (6.2, D.). In addition,

some measures may be designated as routine, which would allow adjustment at a single meeting based on the factors provided for in Section 6.2.1. Beyond the directed catch and bycatch management measures provided in Sections 6.6 through 6.10, this section 6.5.3 provides additional bycatch and bycatch mortality reduction programs available for Council use.

6.5.3.1 Full Retention Programs

A full retention program is a regulatory regime that requires participants in a particular sector of the fishery to retain either all of the fish that they catch or all of some species or species group that they catch. Requiring full retention of all or a portion of a vessel's catch allows more careful enumeration of total catch under appropriate monitoring conditions. Full retention requirements also encourage affected fishery participants to tailor their fishing activities so that they are less likely to encounter non-target species. The Council may develop full retention programs for the groundfish fisheries, when such programs are accompanied by an appropriate monitoring mechanism (See 6.4) and where such programs are sufficiently enforceable (See 6.10) such that they are not expected to increase total mortality of overfished species. The development of any full retention will be accompanied by an analysis of the practicability of requiring retention of all of the designated species.

6.5.3.2 Sector-specific and Vessel-specific Total Catch Limit Programs

Total catch limits are defined in Section 2.2.

The Council may specify total catch limits that are transferable or nontransferable among sectors or tradable or nontradable between vessels.

The Council may develop sector- and/or vessel-specific total catch limit programs for the groundfish fisheries when such programs are accompanied by an appropriate monitoring mechanism (See 6.4) and where such programs are sufficiently enforceable (See 6.10) such that they are not expected to increase vessel detection-avoidance activities.

Sector-specific Total Catch Limit Program

A sector-specific total catch limit program is one in which a fishery sector would have access to a pre-determined (probably through the harvest specifications and management measure process, 6.2, C) amount of a groundfish FMU species, stock, or stock complex that would be allowed to be caught by vessels in that sector. Once a total catch limit is attained, all vessels in the sector must cease fishing until the end of the limit period, unless the total catch limit is increased by the transfer of an additional limit amount. A sector-specific total catch limit program could be based on either: 1) monitoring of landed catch and inseason modeling of total catch based on past landed catch and bycatch rates, or 2) monitoring of total catch and real-time delivery of total catch data. If a sector-specific total catch limit program is based on inseason monitoring of landed catch, a sector would close when inseason total catch modeling estimated that the sector had achieved an FMU species, stock, or stock complex total catch limit. If a sector-specific total catch limit program is based on inseason monitoring of total catch, a sector would close when inseason total catch monitoring estimated that the sector had achieved an FMU species, stock, or stock complex total catch limit. If inseason monitoring of total catch is possible, sector participants in a sector-specific total catch limit program could either fish in an open competition with each other for total catch limits or could cooperate with each other to keep their total catch below total catch limits.

In developing a sector-specific total catch program, the Council will initially consider the following 10 groundfish fishery sectors for assignment of total catch limits:

1. Non-whiting limited entry trawl vessels.
2. At-sea Pacific whiting catcher-processors.
3. Limited entry trawl vessels delivering to at-sea Pacific whiting motherships.
4. Limited entry trawl vessels delivering Pacific whiting to shore-based processing plants.
5. Limited entry longline vessels.
6. Limited entry pot vessels.
7. Directed open access vessels. These are vessels without a groundfish limited entry permit that on a per-trip or per-landing basis demonstrate a fishing strategy targeting groundfish.
8. Incidental open access vessels. These are vessels that on a per-trip or per-landing basis are not fishing under a groundfish limited entry permit and not targeting groundfish, but may catch some amount of groundfish incidentally.
9. Tribal vessels targeting groundfish (see Section 6.2.4)
10. Recreational fishers (fishing from a vessel, from shore, or by another means), including charter (for hire) vessels.

As necessary, the Council will establish criteria for deducting total catch by a particular vessel from a particular sector's total catch limit. For example, the same limited entry trawl vessel may make landings attributable to the shore-based whiting sector or the nonwhiting limited entry trawl sector, so assignment of a particular landing (and associated bycatch) to one or the other sector would be necessary. Similarly, an open access vessel may target groundfish on a particular trip or time of year, falling into the directed open access sector, while at other times targeting nongroundfish species but catching groundfish incidentally and falling into the incidental open access sector. In general, the composition of a particular vessel's landing and bycatch associated with that landing will be used as the basis for assigning total catch to a sector (recognizing that associated bycatch may be directly monitored or estimated). However, other criteria may be used if appropriate.

Sector-specific total catch limits may be applied to one or more of the 10 sectors enumerated above and separate limits may apply to one or more FMU species, stocks, or stock complexes. Two or more of these sectors may be grouped and assigned an overall total catch limit for a given FMU species, stock, or stock complex; similarly, any of the 10 sectors may be further subdivided to create additional sectors for the purpose of assigning a total catch limit for a given FMU species, stock, or stock complex. In considering which sectors should be assigned a total catch limit for a given FMU species, stock, or stock complex, the Council will consider current and/or projected total catch of the FMU species, stock, or stock complex by vessels in that sector and the capacity of current monitoring programs to provide sufficiently accurate and timely data to manage to a total catch limit, or the feasibility of establishing such a monitoring program for the sector in question.

Vessel-specific Total Catch Limit Program

Vessel-specific total catch limits are similar to individual vessel quotas (see 6.9.3) as applied to groundfish FMU species, stocks, or stock complexes and require more intense monitoring than a sector-specific total catch limit program. Vessel-specific total catch limits may be established for vessels participating in a sector for which sector-specific total catch limits have already been established. Under a vessel-specific total catch limit program, the participating vessels would be monitored inseason and each vessel would be prohibited from fishing once it had achieved its total catch limit for a given FMU species, stock, or stock complex. The Council will establish the criteria necessary to determine what portion of a sector-specific total catch limit will be assigned to any vessel qualifying for a vessel-specific total catch limit. The Council also may attach incentives, such as increased cumulative landing limits, or requirements, such as carrying observers, when assigning total catch limit amounts to a vessel.

Inseason Adjustment of Sector Total Catch Limits

The Council may increase or decrease a sector limit during the limit period (the fishing year or biennial management period, for example), but should only do so in exigent circumstances and based on the criteria described below. If increasing sector limits inseason were to become a common management response, this could erode their effectiveness as incentives to fishery participants to adopt bycatch-reducing techniques and practices. Furthermore, adjusting a sector total catch limit could make the application of vessel-specific total catch limits in that sector difficult. A change in the sector limit would require a corresponding adjustment to each vessel limit, which would have to be accounted for in any monitoring program.

Inseason (during the limit period) the Council should only increase a sector total catch limit for a constraining species (a species whose OY or total catch limit prevents attainment of target species' OYs) if all of the following conditions are met:

1. Total catch monitoring indicates a constraining species' sector total catch limit will be exceeded well before the end of the limit period and the estimated target species' total catch for that sector (for the limit period) is well below the total catch previously predicted for the limit period.
2. Monitored and projected total catch in other sectors (with or without sector total catch limits) indicates that the OY for the constraining species in question (established on an annual or other basis) will not be exceeded if the sector total catch limit is increased.

An increase in a sector total catch limit could be done through a transfer from another sector's total catch limit for the same species.

The Council may need to reduce a sector's total catch limit because of an overage in one or more sectors. An overage means total catch that exceeds or is projected to exceed a sector's total catch limit for a particular species or species group. The term overage also applies to sectors not operating under total catch limits if total catch of the species in question (actual or projected) is above previous projections made for those sectors prior to the start of any given period (bimonthly period, fishing year, etc.). The Council could also reduce a sector's total catch limit in the form of a sector-to-sector transfer, as described above. The following principals should apply when considering an inseason downward adjustment in a total catch limit:

1. In order to avoid an overage, fishing may be prohibited after the date when a sector's total catch limit is projected to be reached, rather than waiting to close the fishery based on retrospective total catch estimates (available, for example, in the QSM report). This strategy is relevant to sectors without real-time reporting.
2. A downward adjustment should only be considered as a last resort when it is being considered for use as a compensation for projected overages in other sectors. Measures to rapidly reduce projected total catch in sectors where the overages are projected to occur, or in sectors without total catch limits (or for non-catch-limited species) should be considered first. These measures could be, for example, changes to landing limits or changes in the size, configuration, and duration of time/area closures.
3. If a sector has an overage that needs to be compensated for by a change in total catch limits for other sectors, any downward adjustment in those sector's total catch limits should reflect an equitable reduction across all sectors, either through a proportional reduction in equivalent total catch limits or through the application of other management measures intended to reduce total catch of the species in question.

4. In the case of a reduction that is part of an intra-sector transfer, the criteria described above for an increase shall apply. In no case shall a reduction consequent of a transfer disadvantage the vessels in a sector in comparison to other sectors and with respect to fishing opportunity.

6.5.3.3 Catch Allocation to, or Gear Flexibility For, Gear Types With Lower Bycatch Rates

Catch allocations (Section 6.3), catch limits (Section 6.7), and fishing areas (Section 6.8) may be set so that users of gear types with lower bycatch rates have greater fishing opportunities than users of gear with higher bycatch rates. Increased fishing opportunities for users of gear types with lower bycatch rates could come in the form of increased overall amounts of fish available for directed or incidental harvest, increased landings limits, or increased allowable fishing areas. Increased fishing opportunities made available under this provision may not be provided in such a way that the number of fishing vessels participating in the groundfish fisheries is expected to increase.

Recreational Catch and Release Management

[6.4 Recreational Catch and Release Management]

The Council may develop recreational catch-and-release programs for any groundfish stock through the ~~appropriate rulemaking process~~ either the harvest specifications and management measures rulemaking (6.2, C.) or the full rulemaking (6.2, D.) processes. The Council will assess the type and amount of groundfish caught and released alive during fishing under such a program and the mortality of such fish. Management measures for such a program will, to the extent practicable, minimize mortality and ensure extended survival of such groundfish.

6.6 Gear Definitions and Restrictions

The Council uses gear definitions and restrictions to protect juvenile fish (trawl mesh size), to disable lost gear so that it no longer catches fish (biodegradable escape panels for pots), to slow the rates of catch in particular sectors (recreational fisheries hook limits), to reduce bycatch of non-target species (trawl configuration requirements), and to protect marine habitat (trawl roller gear size restrictions.) Gear types permitted for use in the West Coast groundfish fisheries in Federal waters are listed in Federal regulations at 50 CFR 660.302 and in a nationwide list of fisheries at 50 CFR 600.725. No vessel may fish for groundfish in Federal waters using any gear other than those authorized in Federal regulations. Gear definitions and restrictions for both the commercial and recreational fisheries may be revised using either the specifications-and-management-measures rulemaking process (6.2, C.) or the full rulemaking process (6.2, D.). When developing revisions to gear definitions and restrictions, the Council shall consider the expense of such revisions to fishery participants and the time required for participants to work with gear manufacturers to meet new requirements.

6.6.1 Commercial Fisheries

[6.5.2.3 Gear Restrictions]

This ~~plan~~ FMP authorizes the use of trawls, pots (traps), longlines, hook-and-line (mobile or fixed) and setnets (gillnets and trammel nets) as legal gear for the commercial harvest of groundfish.

6.6.1.1 Prohibitions

The use of setnets is prohibited in all waters north of 38° N. latitude.

Bottom trawl gear with footropes larger than eight inches in diameter is prohibited shoreward of a line approximating the 100 fathom depth contour. This boundary line is defined in Federal regulations by precise latitude-longitude coordinates (see 50 CFR 660, Subpart G). In order to protect groundfish EFH, this makes permanent a prohibition implemented biennially to reduce the bycatch of overfished species. The origin of this prohibition is discussed further below in Section 6.6.1.2.

The use of bottom trawl footrope gear with a footrope diameter larger than 19 inches is prohibited in the management area.

The use of dredge gear is prohibited in the management area.

The use of beam trawl gear is prohibited in the management area.

States may implement parallel measures within their waters.

6.6.1.2 Trawl Gear

[11.2.1.1 Trawl gear and 6.1.2 Mesh Size]

Trawl gear is a cone or funnel-shaped net, which is towed or drawn through the water by one or two vessels. Trawls are used both on the ocean bottom and off bottom. They may be fished with or without trawl doors. They may employ warps or cables to herd fish. Trawl gear includes roller, bottom, and pelagic (mid-water) trawls, and, as appropriate, trawls used to catch non-groundfish species but which incidentally intercept groundfish. Trawl gear is complex, usually constructed from several panels of mesh and engineered with varying ropes, chains, and trawl doors to target particular sizes, shapes, or species of fish. The Council has historically worked with the trawl industry and the states, usually through the issuance of EFPs, to develop new trawl gear restrictions intended to accomplish one or more FMP goals, usually the reduction of bycatch. The following discussion of the Council's efforts to modify trawl gear provides examples of the types of trawl gear modifications that may be made to meet FMP goals, but does not limit the range of future trawl gear restrictions.

In the early-mid 1990s, the Council engaged the trawl industry in a series of discussions on modifying trawl nets to minimize juvenile fish bycatch. Since 1995, bottom trawl nets have been required to be constructed with a minimum mesh size of 4.5 inches, and pelagic trawl nets with a minimum mesh size of 3 inches. Minimum net mesh sizes are intended to allow immature fish to pass through trawl nets. To ensure the success of minimum mesh size restrictions in allowing juvenile fish to escape trawl nets, the Council also developed restrictions preventing trawlers from using a double-walled codend. Further restrictions related to this objective include prohibitions on encircling the whole of a bottom trawl net with chafing gear and restrictions on the minimum mesh size of pelagic trawl chafing gear (16 inches.)

In 2000, the Council began to distinguish between large and small footrope trawl gear. Large footrope gear is bottom trawl gear with a footrope diameter larger than 8 inches, including any material (rollers, bobbins, etc.) encircling the footrope. Small footrope gear is bottom trawl gear with a footrope diameter of 8 inches or smaller. Pelagic trawl gear is required to have unprotected footrope gear and is not permitted to be encircled with chains, rollers, bobbins, or other material. Initially, the Council used the distinction between large and small footrope gear to prohibit large footrope use for less abundant, nearshore, and continental shelf species. Large footrope gear allows trawlers to access rockier areas, by bouncing the bottom of the trawl net over larger obstructions without tearing. Allowing only small footrope gear in nearshore and shelf areas was intended to reduce trawl access to newly-designated overfished species and their rockier habitats.

Since the Council introduced RCAs in 2002 (through emergency rulemaking, later made permanent regulations), large footrope trawl gear has been prohibited inshore of the western boundary of the trawl RCA. RCA boundary lines are set to approximate ocean bottom depth contours and the western boundary of the trawl RCA has not been shallower than a line approximating the 150 fm depth contour. (See 6.8.3 for the use of RCAs as a management tool.) Six of the eight overfished species are continental shelf species and this restriction on the use of large footrope gear continues to reduce trawler access to rocky nearshore habitat. Over time, these footrope size restrictions, coupled with restricted landing limits, have re-configured trawl activities in the nearshore area so that they primarily target the more abundant flatfish species.

In 2005, the Council introduced new trawl gear requirements for small footrope trawl gear north of 40°10.00' N. latitude. Trawlers operating inshore of the Trawl RCA are required to use selective flatfish trawl gear, which is configured to reduce bycatch of rockfish while allowing the nets to retain flatfish. Selective flatfish trawl nets have an ovoid trawl mouth opening that is wider than it is tall and the headropes on these nets are recessed from the trawl mouth. This combination of a flattened oval shape and a recessed headrope herds flatfish into the trawl net while allowing rockfish to slip up and over the headrope, never entering the net. Groundfish trawlers worked with the State of Oregon to develop these nets in order to have greater access to healthy flatfish stocks. The Council is working with the State of California to determine whether the selective flatfish trawl net is also effective at reducing the bycatch of southern overfished species in fisheries targeting more abundant southern stocks.

As part of a suite of measures intended to mitigate the adverse effects of fishing in groundfish EFH, the eight inch footrope restriction described here is made permanent, as listed in Section 6.6.1.1, prohibitions. A 100 fm management line, the shoreward boundary of the trawl RCA when the permanent measure was implemented, is identified as the seaward extent of the prohibition.

6.6.1.3 Nontrawl Gear

[11.2.1.3 Nontrawl gear; 11.2.1.2 Fixed gear]

Nontrawl gear includes all legal commercial gear other than trawl gear. Fixed gear (anchored nontrawl gear) includes longline, pot, set net, and stationary hook-and-line gear. Fixed gear must be marked, individually or at each terminal end as appropriate, with a pole, flag, light, and radar reflector attached to each end of the set, and a buoy clearly identifying the owner. In addition, fixed gear shall not be left unattended for more than seven days. Reporting of fixed gear locations is not required, but fixed gear fishermen are encouraged to do so with the U.S. Coast Guard. Reporting of fixed gear will facilitate compensation claims by fishermen who have lost fixed gear.

Since 1982, groundfish traps have been required to be constructed with biodegradable escape panels in such a manner that an opening of at least 8 inches in diameter results when the escape panel deteriorates. These biodegradable panels ensure that, if a trap is lost or not attended for extended periods of time, it will not continue to fish. Gear that has been lost and continues to capture fish while it is unattended is often referred to as ghost fishing gear.

Mesh size in fish pots (traps) also affects the size of fish retained in the trap. By increasing the minimum mesh size in all or part of the trap, small fish may be allowed to escape. There are no minimum mesh size requirements for groundfish pot vessels. However, sablefish is the primary trap gear target species and fishermen are usually paid more per pound for larger-sized sablefish. Thus, there are few incentives for trap fishermen to use smaller mesh sizes. ***[Check with GAP to see if there's a mesh size that's generally considered minimum for sablefish. Also, what about nearshore groundfish (cabezon, kelp greenling) take with traps in the open access fishery?]***

6.6.2 Recreational Fisheries

[11.2.2 Recreational Fishing]

Recreational fishing is fishing with authorized gear for personal use only, and not for sale or barter. The only types of fishing gear authorized for recreational fishing are hook-and-line and spear. The definition of hook-and-line gear for recreational fishing is the same as for commercial fishing. Hook limits, restrictions on the number of hooks that may be used per fishing line, or on the size or configuration of hooks used in a recreational fishery, have been established as routine management measures under 6.2.1. Hook limits are used in the recreational fishery to either constrain recreational fishery effort by limiting the number of hooks per fishing line, or to select for certain species by limiting the size of hooks used.

6.6.3 Bottom-contact Gear

In order to mitigate the adverse impacts of fishing on groundfish EFH, the Council may impose restrictions on a range of gear types collectively termed bottom-contact gear. These are gear types that by design and through normal use make contact with the sea floor. Such contact is more than intermittent in duration and areal extent. Bottom trawl and groundfish fixed gear are examples of gear types that are considered bottom contact gear. Midwater trawl gear, although it may occasionally make contact with the sea floor during deployment, is an example of a gear type not considered a bottom contact gear because the gear is not normally intended to be deployed so that it makes such contact, nor is such contact normally more than intermittent. Similarly, vertical hook-and-line gear that during normal deployment is not permanently in contact with the bottom would not be considered bottom-contact gear. For the purpose of regulation, specified legal gear types may be designated bottom contact or non-bottom-contact.

6.7 Catch Restrictions

[6.5.2.2 Catch Restrictions]

The FMP authorizes the commercial and recreational harvest of species listed in Chapter 3 of this plan, and provides for limiting the harvest of these species in Chapters 5 and 6. The Council uses a variety of management measures to constrain rates of total catch, including direct limits on amounts that may be taken and landed in commercial and recreational fisheries. Trip limits constrain landed catch in the commercial fisheries; bag limits constrain landed catch in the recreational fisheries. Total catch limits constrain incidental catch amounts permitted in a particular fishery or sector and may refer to either amounts of incidentally caught non-target species that are not discarded (not considered bycatch under the Magnuson-Stevens Act), to amounts of non-target species that are discarded, or to both. Designating certain species as prohibited ensures that the FMP complies with international, Federal, and state regulations and management requirements for non-groundfish species.

[11.4 Catch Restrictions]

Groundfish species harvested directly or incidentally in the territorial sea (0-3 nautical miles) will be counted toward any catch limitations established under the authority of this FMP. These catch restrictions apply to domestic fisheries off Washington, Oregon, and California. Procedures for designating and adopting catch restrictions are found in Section 6.2.

6.7.1 All Fisheries

Quotas, size limits, and total catch limits may be applied to either commercial (groundfish or non-groundfish) or recreational fisheries.

[6.1.4 Quotas, Including Individual Transferable Quotas]

Quotas. Quotas may be used for certain species. Quotas are specified harvest limits, the attainment of which causes closure of the fishery for that species, gear type, or individual participant. Quotas may be established for intentional allocation purposes or to terminate harvest at a specified point. They may be specified for a particular area, gear type, time period, species or species group, and/or vessel or permit holder. Quotas may apply to either target species or bycatch species.

[6.1.6 Size Limits]

Size limits. Size limits are used to prevent the harvest of immature fish or fish that have not reached their full reproductive capacity. In some cases, size limits are used in reverse to harvest younger recruit or pre-recruits and to protect older, larger spawning stock. ~~Generally, harvesting the larger members of the population tends to increase the yield by taking advantage of the combined growth of individual fish.~~ Slot limits, which prohibit the retention of fish that are either smaller than a lower size limit or larger than a higher size limit, are used to protect both immature fish and more fecund older fish. Size limits may be applied to all fisheries, but are generally used where fish are handled individually or in small groups such as trap-caught sablefish and recreational-caught fish. Size limits lose their utility in cases where the survival of the fish returned to the sea is low (e.g., rockfish).

Total catch limits. The Council has historically managed total catch of groundfish species by monitoring direct and incidental catch inseason, and then making inseason adjustments to catch and other restrictions to ensure that annual total catch does not exceed allowable harvest amounts. Expected bycatch amounts of overfished species are set aside as anticipated incidental take in various fisheries. Total catch limits, by contrast, are sector-specific or vessel-specific limits on total catch (landed and discarded catch) of groundfish FMU species. A cumulative trip limit is the maximum amount of groundfish species or species group that may be taken and retained, possessed, or landed per vessel in a specified period of time without a limit on the number of landings or trips, unless otherwise specified. In setting the biennial specifications and management measures, the Council will review the total harvestable surplus of individual FMU species or species groups and determine whether there are fishery sectors that may be managed with total catch limits. If a sector or vessel achieves a total catch limit inseason, all vessels in the sector, in the case of sector limits, or the individual vessel, in the case of vessel limits, would have to cease fishing at that time, unless the total catch limit is increased by means of a transfer or trade to the sector or vessel in question. Fisheries managed with total catch limits also must be subject to monitoring and requirements that provide real-time or projected total catch reporting (See 6.4).

6.7.2 Commercial Fisheries

[6.5.2.2 Catch Restrictions]

Prohibited Species. It is unlawful for any person to retain any species of salmonid or Pacific halibut caught by means of fishing gear authorized under this FMP, except where a Council approved monitoring program is in effect. State regulations prohibit the landing of crab incidentally caught in trawl gear off Washington and Oregon. However, trawl fishermen may land Dungeness crab in the State of California north of Point Reyes in compliance with the state landing law. Retention of salmonids and Pacific halibut caught by means of other groundfish fishing gear is also prohibited unless authorized by 50 CFR Part 300, Subparts E or F; or Part 600, Subpart H. Specifically, salmonids are prohibited species for trawl, longline and pot gear. Halibut may be retained and landed by troll and longline gear only during times and under conditions set by International Pacific Halibut Commission and/or other Federal regulations. Salmon taken by troll gear may be retained and landed only as specified in troll salmon regulations. Groundfish species or species groups under this FMP for which the quota has been reached shall be treated in the same manner as prohibited species. Species identified as prohibited must be returned to the sea as soon as practicable with a minimum of injury when caught and brought aboard, after allowing for sampling by an observer, if any. Exceptions may

be made for the recovery of tagged fish.

The FMP authorizes the designation of other prohibited species in the future or the removal of a species from this classification, consistent with other applicable law for that species. The designation of other prohibited species or the removal of species from this classification must be made through either the biennial or annual specifications-and-management-measures rulemaking process (6.2, C.) or through the full rulemaking process (6.2, D.)

[6.1.3 Landing and Frequency Limits]

Trip limits. A trip limit is the amount of groundfish that may be taken and retained, possessed, or landed from a single fishing trip. Trip limits, trip frequency limits, and trip limits that vary by gear type or fishery may be applied to either groundfish or non-groundfish fisheries. Trip landing limits and trip frequency limits are used to control landings to delay achievement of a quota or harvest guideline and thus avoid premature closure of a fishery if it is desirable to extend the fishery over a longer time. Trip landing limits may also be used to minimize targeting on a species or species group while allowing landings of some level of incidental catch. Trip landing limits are most effective in fisheries where the fisherman can control what is caught. In a multispecies fishery, trip limits can discourage targeting while, at the same time, providing for the landing of an incidental catch species that requires a greater degree of protection than the other species in the multispecies catch. Conversely, a trip limit may be necessary to restrict the overall multispecies complex catch in order to provide adequate protection to a single component of that catch.

[9.0 Restrictions on Other Fisheries]

Trip limits for non-groundfish fisheries. For each non-groundfish fishery considered, a reasonable limit on the incidental groundfish catch may be established that is based on the best available information (from EFPs, logbooks, observer data, or other scientifically acceptable sources). These limits will remain unchanged unless substantial changes are observed in the condition of the groundfish resource or in the effort or catch rate in the groundfish or non-groundfish fishery. Incidental limits or species categories may be imposed or adjusted in accordance with the appropriate procedures described in Section 6.2. The Secretary may accept or reject but not substantially modify the Council's recommendations. ~~The trip limits for the pink shrimp and spot and ridgeback prawn fisheries in effect when Amendment 4 is implemented will be maintained unless modified based on the above criteria through the management adjustment framework.~~ The objectives of this framework are to:

- Minimize discards in the non-groundfish fishery by allowing retention and sale, thereby increasing fishing income;
- Discourage targeting on groundfish by the non-groundfish fleet; and,
- Reduce the administrative burden of reviewing and issuing EFPs for the sole purpose of enabling non-groundfish fisheries to retain groundfish.

6.7.3 Recreational Fisheries

[6.1.7 Bag Limits]

Bag limits. A bag limit is a restriction on the number of fish that may be taken and retained by an individual angler operating in a recreational fishery, usually within a period of a single day. Bag limits have long been used in the recreational fishery and are perhaps the oldest method used to control recreational fishing. The intended effect of bag limits is to spread the available catch over a large number of anglers and to avoid

waste.

Boat limits. A boat limit is a cumulative restriction on the total number of fish that may be taken and retained by all of the persons operating from a recreational fishery vessel. Boat limits restrict the overall per-vessel catch in a recreational fishery. A boat limit may prevent an angler from taking what would otherwise be allowed within an individual bag limit, depending on the number of fish already taken on that boat.

Dressing requirements. Anglers may be subject to requirements that they retain the skin on their filleted catch in order to allow port biologists and enforcement officers to better identify recreational catch by species.

6.8 Time/Area Closures

The Council uses a variety of time/area closures both to control the directed rate of catch of targeted species and to reduce the incidental catch of non-target, protected (including overfished) species; ~~and to prevent fishing in specified areas in order to mitigate the adverse effects of such activities on groundfish EFH.~~ Time/area closures vary by type both in their permanency and in the size of area closed. When the Council sets fishing seasons (Section 6.8.1) it generally uses latitude lines extending from shore to the EEZ boundary to close large sections of the EEZ for part of a fishing year to one or more fishing sectors. Rockfish Conservation Areas (RCAs at 6.8.2), by contrast, are coastwide fishing area closures bounded on the east and west by lines connecting a series of coordinates approximating a particular depth contour. RCAs are gear-specific and their eastern and western boundaries may vary during the year. RCAs also may be polygons that are closed to fishing for a brief period (less than one year) in order to provide short-term protection for the more migratory overfished or other protected species. Groundfish fishing areas (GFAs at 6.8.3) are enclosed areas of high abundance of a particular species or species group and may be used to allow targeting of a more abundant stock within that enclosed area. Long-term bycatch mitigation closed areas (see 6.8.4) have boundaries that do not vary by season and are not usually modified annually or biennially. ~~Ecologically important habitat closed areas (6.8.5) and the bottom trawl footprint closure (6.8.6) are established in order to mitigate the adverse effects of fishing on essential fish habitat.~~ Marine Protected Areas (MPAs at 6.8.7) are longer-term, discrete closed areas with unchanging boundary lines that may apply to one or more fishing sectors. Because the RCAs, the Yelloweye Rockfish Conservation Area, and the Cowcod Conservation Areas have all been implemented to protect overfished groundfish species, they are collectively referred to in Federal regulations as Groundfish Conservation Areas or GCAs.

The coordinates defining the boundaries of time/area closures are published in federal regulations. In order to ensure consistency between the areas named in this FMP (see below) and corresponding areas defined in federal regulations, the Council may publish in the groundfish SAFE or other publication detailed specifications for these time/area closures, by means of maps, lists of coordinates, or other descriptors.

[6.1.8 Time/Area Closures (Seasons and Closed Areas)]

6.8.1 Seasons

Fishing seasons are closures of all or a portion of the West Coast EEZ for a particular period and time of year. Seasons may be used to constrain the rate of fishing on a targeted species, to encourage targeting of a more abundant stock during periods of higher aggregation, or to limit catch of a protected species during its spawning season. Seasons may be for the entire fleet, for particular sectors within the fleet, for regions of the coast, or for individual vessels. Designation and adoption of seasons must be made through either a specifications-and-management-measures rulemaking (6.2, C.) or a full rulemaking (6.2, D.)

Seasons have been used to manage the commercial Pacific whiting trawl and limited entry fixed gear fisheries. The non-tribal whiting fishery is divided into three sectors: catcher boats that deliver to shorebased

processing plants, catcher vessels that deliver to motherships at sea, and at-sea catcher-processors. Each of these sectors is managed with its own season. The shorebased sector also includes an early season for waters off California, to allow vessels in that area to access whiting when it is migrating through waters off California. The limited entry, fixed gear sablefish fishery is managed with a seven-month season, April through October. Outside the primary seasons for both whiting and fixed gear sablefish, incidental catch allowances of these species are provided to allow retention of incidental catch.

In addition to the whiting and sablefish seasons, intended to constrain the directed catch of the target stocks within a particular period, commercial fisheries may be constrained by season to protect overfished species. Lingcod are known to spawn and nest in the winter months. Male lingcod guard the nests and are easily caught with hook-and-line gear during the nesting period. Lingcod has a higher rate of discard survival than many other groundfish species; however, lingcod eggs are easy prey if the guarding male is removed from the nest. Commercial non-trawl and recreational fisheries closures during the winter months have been part of the lingcod rebuilding strategy since 2000 and are discussed in the rebuilding plan at 4.5.4.4.

Recreational fisheries also may be managed with fishing seasons, either to constrain the directed catch of target species or to reduce the incidental catch of protected species. Winter recreational fisheries season closures are part of the lingcod rebuilding strategy. Fishing seasons with one or more closed periods during the fishing year are intended to reduce catch rates of both more abundant and protected stocks. Seasonal closures are used off all three states—in combination with bag limits, RCAs, and other measures—to prevent recreational fisheries from exceeding expected harvest levels.

6.8.2 Rockfish Conservation Areas

In September 2002, NMFS implemented an emergency rule at the Council's request to implement a Darkblotched Rockfish Conservation Area to close continental shelf/slope waters north of 40°10.00' N. latitude. Since January 2003, the Council has used coastwide RCAs to reduce the incidental catch of overfished species in waters where they are more abundant. Of the eight currently overfished species, six are continental shelf species, and RCAs have primarily been designed to close continental shelf waters. Section 4.5.4 describes the role of RCAs in this FMP's overfished species rebuilding plans.

Different gear types have greater or lesser effects on different overfished species. Thus, RCAs are designed to be gear-specific to better target protection for the species most affected by each gear group. For example, darkblotched rockfish and POP are continental slope species that are most frequently taken with trawl gear, which means that the Trawl RCA must extend out to greater depths in order to protect these species. Yelloweye rockfish, in contrast, is more frequently taken with hook-and-line gear, which means that both the commercial and recreational hook-and-line fisheries require yelloweye rockfish protection measures as part of that species' rebuilding plan. The Non-Trawl RCA is concentrated over the continental shelf, while the recreational fisheries use season closures and an MPA to reduce yelloweye rockfish bycatch.

RCAs are typically bounded on the east and west by lines drawn between a series of latitude/longitude coordinates approximating certain depth contours. An RCA may also be a polygon, designated by lines drawn between a series of latitude/longitude coordinates, which is closed to fishing for some period less than a year in duration. Some RCAs may extend to the shoreline. Although both the eastern and western RCA boundaries have changed over time for all of the gear groups, the area between the trawl RCA boundary lines approximating the 100 fm and 150 fm depth contours has remained closed since January 2003. Adopted potential RCA boundary lines are described in Federal regulations at 50 CFR 660.390-394. The size and shape of the RCAs may be adjusted inseason via the routine management measures process (See 6.2.1) by using previously adopted potential RCA boundary lines. Designation and adoption of new potential RCA boundary lines must be made through either a specifications-and-management-measures rulemaking (6.2, C.)

|| or a full rulemaking (6.2, D.)

6.8.3 *Groundfish Fishing Areas*

|| Groundfish Fishing Areas or GFAs are areas of known higher abundance of a particular species or species group, enclosed by straight lines connecting a series of coordinates. A GFA designated for a more abundant species may be used to constrain fishing for that species within that particular GFA. For example, fishing for schooling species, such as petrale sole or chilipepper rockfish, could be allowed within GFAs for those species, but not permitted outside of the GFAs, where fisheries for those species might have higher incidental catches of overfished species.

|| Designation and adoption of GFAs must be made through either a specifications-and-management-measures rulemaking (6.2, C.) or a full rulemaking (6.2, D.)

6.8.4 *Long-term Bycatch Mitigation Closed Areas*

|| The Council uses a variety of time/area closures to reduce incidental catch of protected species in fisheries targeting groundfish. The extent and configuration of these areas do not vary seasonally and they are not usually modified through inseason or biennial management actions. The location and extent of these areas are described by coordinates published in permanent regulations. Modification of such permanent regulations would require full notice-and-comment rulemaking as described at Section 6.2 D. As of January 1, 2005, there are five such closures:

- || 1. Klamath River Conservation Zone (KRCZ): Established in Federal regulations in 1993 to reduce the bycatch of threatened and endangered salmon stocks taken incidentally in the Pacific whiting fisheries. The KRCZ is closed to trawling for whiting. Its boundaries are defined as the ocean area surrounding the Klamath River mouth, bounded on the north by 41°38.80' N. latitude, on the west by 124°23.00' W. long., and on the south by 41°26.63' N. latitude.
- || 2. Columbia River Conservation Zone (CRCZ): Established in Federal regulations in 1993 to reduce the bycatch of threatened and endangered salmon stocks taken incidentally in the Pacific whiting fisheries. The CRCA is closed to trawling for whiting. Its boundaries are defined as the ocean area surrounding the Columbia River mouth, bounded by a line extending for 6 nautical miles due west from North Head along 46°18.00' N. latitude to 124°13.30' W. longitude., then southerly along a line of 167 True to 46°11.10' N. latitude by 124°11.00' W. longitude, then northeast along Red Buoy Line to the tip of the south jetty.
- || 3. Western Cowcod Conservation Area (CCA): First established via Federal notice in 2001 as an overfished species rebuilding measure. Incorporated into the FMP (Section 4.5.4.6) via Amendment 16-3 and established in Federal regulation in 2005 to reduce the bycatch of cowcod taken incidentally in all commercial and recreational fisheries for groundfish. The Western CCA is an area south of Point Conception defined by a series of coordinates describing straight lines enclosing a polygon.
- || 4. Eastern CCA: First established via Federal notice in 2001 as an overfished species rebuilding measure. Incorporated into the FMP (Section 4.5.4.6) via Amendment 16-3 and established in Federal regulation in 2005 to reduce the bycatch of cowcod taken incidentally in all commercial and recreational fisheries for groundfish. The Eastern CCA is an area west of San Diego defined by a series of coordinates describing straight lines enclosing a polygon.

5. Yelloweye Rockfish Conservation Area (YRCA): First established via Federal notice 2003 as an overfished species rebuilding measure. Incorporated in the FMP (Section 4.5.4.8) via Amendment 16-3 and established in Federal regulation in 2005 to reduce the bycatch of yelloweye rockfish in the recreational fisheries for groundfish and halibut. The YRCA is a C-shaped area off the northern Washington coast defined by a series of coordinates describing straight lines enclosing a polygon.

6.8.5 Ecologically Important Habitat Closed Areas

The Council has identified discrete areas that are closed to fishing or to fishing with specified gear types, or are only open to fishing with specified gear types. These ecologically important habitat closed areas are intended to mitigate the adverse effects of fishing on groundfish EFH. The extent and configuration of these areas do not vary seasonally and they are not usually modified through inseason or biennial management actions. For this reason they may be considered marine protected areas (see Section 6.8.7). The location and extent of these areas are described by a series of latitude-longitude coordinates enclosing a polygon published in permanent Federal regulations. For areas closed to bottom trawl gear, the habitat conservation framework may be used to eliminate such closed areas or modify their location or extent. Otherwise, modification of permanent regulations describing these closed areas would require full notice-and-comment rulemaking as described at Section 6.2 D. As of June 30, 2006, there are 52 such closures: ***[NB: Amendatory language should be consistent with the areas implemented by final rule.]***

Closed to bottom trawl gear off of Washington:

1. Olympic_2
2. Biogenic_1
3. Biogenic_2
4. Grays Canyon
5. Biogenic_3

Closed to bottom trawl gear off of Oregon:

1. Nehalem Bank / Shale Pile
2. Astoria Canyon
3. Siletz Deepwater
4. Daisy Bank / Nelson Island
5. Newport Rockpile / Stonewall Bank
6. Heceta Bank
7. Deepwater off Coos Bay
8. Bandon High Spot
9. Rogue Canyon

Closed to all bottom contact gear off of Oregon:

1. Thompson Seamount
2. President Jackson Seamount

Closed to bottom trawl gear off of California:

1. Eel River Canyon
2. Blunts Reef
3. Mendocino Ridge
4. Delgada Canyon
5. Tolo Bank
6. Point Arena Offshore

7. Cordell Bank
8. Biogenic Area 12
9. Farallon Islands / Fanny Shoal
10. Half Moon Bay
11. Monterey Bay / Canyon
12. Point Sur Deep
13. TNC/ED Area 2
14. TNC/ED Area 1
15. TNC/ED Area 3
16. Potato Bank
17. Cherry Bank
18. Hidden Reef / Kidney Bank
19. Catalina Island
20. Cowcod Conservation Area East

Closed to all bottom contact gear of California:

1. Cordell Bank (within 50 fm isobath)
2. Davidson Seamount

Closed to fishing off of California except for specified gear types:

1. Anacapa Island SMCA

Closed to fishing off of California:

2. Anacapa Island SMR
3. Carrington Point
4. Footprint
5. Gull Island
6. Harris Point
7. Judith Rock
8. Painted Cove
9. Richardson Rock
10. Santa Barbara
11. Scorpion
12. Skunk Point
13. South Point

For the purpose of regulating the use of fishing gear in ecologically important habitat closed areas in waters off of California, Scottish seine (or fly dragging) gear is not considered bottom trawl gear. The Scottish seine method deploys a weighted rope on the sea bottom in a large polygonal shape, attached to a codend net. The rope is pulled across the bottom, herding the fish towards the codend, which is then hauled back to the vessel.

Maps showing the locations of these closures appear in FMP [Appendix C](#).

6.8.6 Bottom Trawl Footprint Closure

As a precautionary measure, to mitigate the adverse effects of fishing on groundfish EFH, the West Coast EEZ seaward of a line approximating the 700 fm isobath is closed to bottom trawling. This is called the footprint closure because the 700 fm isobath is an approximation of the historic extent of bottom trawling in the management area. This closure is therefore intended to prevent the expansion of bottom trawling into areas where groundfish EFH has not been adversely affected by fishing. The closure encompasses the part of

the EEZ deeper than 3,500 m, the isobath defining the deepest extent of groundfish EFH. Therefore, this closure applies to a part of the management area not identified as groundfish EFH. This measure is intended to be precautionary, recognizing that in the future the best available scientific information may indicate that habitat not currently identified as groundfish EFH is indeed groundfish EFH.

Although primarily intended to mitigate the adverse effects of fishing on EFH, the trawl footprint closure encompasses the part of the EEZ (depths greater than 3,500 m.) not currently identified as EFH. As noted above, the closure is precautionary; there is limited information on the importance to groundfish of habitats in all areas at depths greater than 700 fm. This closure is intended to prevent adverse effects from bottom trawling while over time more information is gathered about groundfish habitat within this area or the relationship between habitats in this area and groundfish EFH. Because this closure applies to an area where bottom trawling effort has been limited or nonexistent, the socioeconomic impacts are modest.

6.8.7 Marine Protected Areas

Executive Order 13158 on MPAs was signed on May 26, 2000. This E.O. defines MPAs as “any area of the marine environment that has been reserved by federal, state, territorial, tribal or local laws or regulations to provide lasting protection to part or all of the natural or cultural resources therein.” Under this FMP, MPAs include all marine areas closed to fishing for any or all gear group(s), by the FMP or implementing Federal regulations for conservation purposes, and which have stable boundaries over time (thereby providing lasting protection). In 2005 the Marine Protected Areas Federal Advisory Committee on Establishing and Managing a National System of Marine Protected Areas made several recommendations on specifying this definition of MPA. They define lasting protection as enduring long enough to enhance the conservation, protection, or sustainability of natural or cultural marine resources. The minimum duration of “lasting” protection ranges from 10 years to indefinite, depending on the type and purpose of MPA. The use of the term “indefinite” indicates permanent protection while recognizing that an MPA designation and level of protection may change for various reasons, including changes in the resources so protected and in how society values those resources. Although all of the time/area closures described in Sections 6.8.2-6.8.6 may be modified through full notice-and-comment rulemaking, most either are practically permanent (portions of the GCAs) or are intended to be permanent (habitat closed areas and the trawl footprint closure). These time/area closures offer lasting protection and may be considered MPAs. New MPAs may be established or these MPAs may be revised through either a specifications-and-management-measures rulemaking (6.2, C.) or a full rulemaking (6.2, D.)

6.9 Measures to Control Fishing Capacity, Including Permits and Licenses

[6.1.1 Permits, Licenses, and Endorsements]

Permits and licenses are used to enumerate participants in an industry and, if eligibility requirements are established or the number of permits is limited, to restrict participation. Participation in the Washington, Oregon, and California groundfish fishery was partially limited beginning in 1994 when the federal vessel license limitation program was implemented (Amendment 6). Subsequently, Amendment 9 further limited participation in the fixed-gear sablefish fishery by establishing a sablefish endorsement. (Chapter 11 describes the groundfish limited entry program in detail.) In December 2003, NMFS reduced participation in the limited entry trawl fleet by buying the fishing rights to 91 limited entry trawl vessels and the Federal and state permits associated with those vessels. There is currently no federal permit requirement for other commercial participants (fishers or processors) or recreational participants (private recreational or charter). The Council may determine that effective management of the fishery requires accurate enumeration of the number of participants in these sectors and may establish a permit requirement to accomplish this. In addition, some form of limitation on participation may be necessary in order to protect the resource or to

achieve the objectives of the FMP.

[6.1.9 Other Forms of Effort Control]

Other forms of effort control commonly used include vessel length endorsements, restrictions on the number of units of gear, or restrictions on the size of trawls, or length of longlines, or the number of hooks or pots. ~~These measures~~ Effort restrictions related to gear may also be useful in reducing bycatch.

[6.5.2.4 Reporting Requirements]

Permit applications for the domestic groundfish fishery, including, but not limited to exempted fishing permits, are authorized by this FMP. Such applications may include vessel name, length, type, documentation number or state registration number, radio call sign, home port, and capacity; owner and/or operator's name, mailing address, telephone number, and relationship of the applicant to the owner; type of fishing gear to be used, if any; signature of the applicant, and any other information found necessary for identification and registration of the vessel.

6.9.1 General Provisions For Permits

[6.5.1.1 Permits]

Federal permits may be required for individuals or vessels that harvest groundfish and for individuals or facilities (including vessels) that process groundfish or take delivery of live groundfish. In determining whether to require a harvesting or processing permit, and in establishing the terms and conditions for issuing a permit, the Council may consider any relevant factors, including whether a permit:

1. Will enhance the collection of biological, economic, or social data.
2. Will provide better enforcement of laws and regulations, including those designed to ensure conservation and management and those designed to protect consumer health and safety.
3. Will help achieve the goals and objectives of the FMP.
4. Will help prevent or reduce overcapacity in the fishery.
5. May be transferred, and under what conditions.

Separate permits or endorsements may be required for harvesting and processing or for vessels or facilities based on size, type of fishing gear used, species harvested or processed, or such other factors that may be appropriate. The permits and endorsements are also subject to sanctions, including revocation, as provided by section 308 of the Magnuson-Stevens Act.

In establishing a permit requirement, the Council will follow the full-rulemaking procedures in Section 6.2.

6.9.1.1 Commercial Fisheries Permits

[6.5.2.1 Permits (General)]

All U.S. commercial fishing vessels are required by state laws to be in possession of a current fishing or landing permit from the appropriate state agency in order to land groundfish in the Washington, Oregon, and California area. Federal limited entry permits authorize fishing within limits and restrictions specified for those permits. ~~Nonpermitted vessels~~ Vessels without such permits are also subject to the specified limits and restrictions for the open access fishery. Federal permits also may be required for groundfish processors. In the event that a federal fishing or access permit is required, failure to obtain and possess such a federal permit will be in violation of this FMP.

6.9.1.2 Recreational Fisheries Permits

[6.5.3.1 Permits (General)]

All U.S. recreational fishermen are required by state laws to obtain a recreational permit or license in order to fish for groundfish. In the event that a federal license or permit is required, failure to obtain and possess such federal permit will be in violation of this FMP.

6.9.2 Sector Endorsements

The Council may establish sector endorsements, such as with the limited entry fixed gear sablefish fishery. Sector endorsements would limit participation in a fishery for a particular species or species group to persons, vessels, or permits meeting Council-established qualifying criteria. Participants in a sector-endorsed fishery may be subject to sector total catch limit management. A sector endorsement, whether it is applied to vessels that already hold limited entry permits or to those in the open access or recreational fisheries, is a license limitation program.

6.9.3 Individual Fishing Quota Programs

Under the Magnuson-Stevens Act, “an ‘individual fishing quota’ means a Federal permit under a limited access system to harvest a quantity of fish, expressed by a unit or units representing a percentage of the total allowable catch of a fishery that may be received or held for exclusive use by a person.” The Council may establish individual fishing quota (IFQ) programs for any commercial fishery sector. IFQ programs would be established for the purposes of reducing fishery capacity, minimizing bycatch, and to meet other goals of the FMP. Participants in an IFQ fishery may be subject to individual total catch limit management (See 6.7.1).

6.9.4 Facilitating Public-Private Partnerships to Reduce Capacity

If consistent with the goals and objectives of this FMP, the Council may facilitate and encourage private purchases of groundfish limited entry permits and corresponding vessels that would result in reduced fleet capacity. As with the federally-sponsored 2003 groundfish trawl buyout program, such private purchases would have to permanently foreclose the future use of subject permits and vessels in West Coast groundfish fisheries. Aside from any socioeconomic benefits, reducing fleet fishing capacity can mitigate adverse impacts of fishing to groundfish EFH to the degree that fishing activity with adverse consequences is reduced. Contracts for the purchase of groundfish limited entry permits and/or vessels may contain conditions specifying that the execution of the contract is contingent on the implementation of other measures to mitigate the adverse impacts of fishing on groundfish EFH. Such measures may be contingent on Council action or recommendations, and the Council will strive to conduct its decision-making in such a way to facilitate the private negotiation of such contract conditions. If contingent mitigation measures include establishing new areas closed to bottom trawl, or the modification of the location and extent of existing areas, the habitat conservation framework described in Section 6.2.4 may be used to implement such areas by regulatory amendment, using the procedures described under 6.2 D.

6.9.5 Capacity Reduction Data Collection

[6.5.8 Access Limitation and Capacity Reduction Programs]

The current condition of the groundfish fisheries of the Washington, Oregon, and California region is such that further reduction of the limited entry fleet may be required in the near future. Research and monitoring programs may need to be developed and implemented for the fishery so that information required in a capacity reduction program is available. Such data should indicate the character and level of participation in the fishery, including (1) investment in vessel and gear; (2) the number and type of units of gear; (3) the distribution of catch; (4) the value of catch; (5) the economic returns to the participants; (6) mobility between fisheries; and (7) various social and community considerations.

6.10 Fishery Enforcement and Vessel Safety

The enforceability of fishery management measures affects the health of marine resources and the safety of human life at sea. When considering new management measures or reviewing the current management regime, the Council will consider the fishery and its characteristics, assess whether the measures are sufficiently enforceable to accomplish the objective of those management measures, and describe measures to be taken to reduce risks to the measures' enforceability. For example, the Council introduced depth-based management (See RCAs at 6.8.3) in 2003 to protect overfished groundfish species with areas closed to fishing. The Council's subsequent recommendation to implement vessel monitoring system (VMS) requirements improved the enforceability of the closed areas so that the closed areas could accomplish the Council's management objective of reducing overfished species catch by preventing vessels from fishing in areas where overfished species are more abundant.

If new management measures are under development, the Council will determine whether requirements are needed to facilitate the enforcement of new management measures.

During the development of new management measures, the Council will consider what measures are also needed to facilitate enforcement. When assessing if the measures are sufficiently enforceable, information should be obtained from:

- Fish tickets inspections and audits
- Enforcement reports
- Discussions with State and Federal fisheries agents and officers
- USCG input
- Observer program reports
- Stakeholder input
- Other relevant information suggested by the EC and the public

When assessing if the measures are sufficiently enforceable, consideration should be given to enforcement risks from:

- Regulations that are complex and difficult to understand: Regulations that are clear in meaning and devoid of exemptions allow little interpretation of their meaning, making it clear to fishers what they can or cannot do.
- Catch limit evasion: the potential for operators to either not declare, under-declare or report catch as other species or species groups on fish tickets; the potential for fishing vessels to offload to unauthorized processing or tending vessels at sea.
- Obscure chain of possession: Required documentation and labeling requirements make the fish distribution system more transparent. The ability to track a product back from the distributor to the harvester gives enforcement officers a powerful tool. It also promotes voluntary compliance by distributors and harvesters alike.
- Unaccounted for bycatch: the potential for vessels to high grade their catch (discard undesirable sizes or species of fish in order to retain desirable sizes or species) in a manner that increases bycatch mortality.
- Unauthorized fishing: the potential for operators to fish undetected in closed areas, in restricted areas with unauthorized gear, or during closed seasons.

6.10.1 Managing Enforcement Risks

The objective of enforcement is to ensure, in a cost effective way, that all fishing is conducted in accordance with fishery regulations. During the development of new management measures, the Council will consider

what measures are also needed to facilitate enforcement. When managing the enforcement risks, consideration should be given to:

- Complexity: Complexity in a management regime can reduce enforceability by making the regime confusing to both fishery participants and enforcement agents. When the Council is developing new management measures, it shall evaluate those measures for their complexity to determine whether management complexity is necessary and whether there are ways to reduce the complexity of new management recommendations.
- Availability and adequacy of surveillance, monitoring, and inspections: What fishery surveillance, monitoring, and inspection methods are available from Federal and State agencies? Are these methods adequate to enforce the measure or measures under Council consideration?
- Compliance behavior: Are the proposed measures adequately enforceable such that they will change fisher behavior in a way that achieves intended results? Are the proposed measures adequately enforceable such that fishers who attempt to evade detection of illegal behavior are not reducing fishing opportunities for those fishers who comply with management measures?
- Unintended consequences: The Council should evaluate the range of behaviors and possible effects that could result if regulations were not adequately enforceable, including: collusion between processors and harvesters, high-value catch recorded as low-value catch, direct sales to retailers without fish tickets being recorded, offloading at-sea to unauthorized vessels, etc.
- Educational programs for public: How does the Council plan to educate the public on new management measures and requirements? Do Council public education efforts, in combination with Federal, State, and Tribe efforts allow adequate time for fishery participants to be made aware of changes to regulations?
- Officer training: Have Federal and State enforcement agents and officers been adequately trained in new fishery management regulations? Does the EC or the Council have training recommendations to ensure that new regulations are clearly understood by those enforcing the regulations?
- Consistent regulations: To the extent possible, similar management measures across the Pacific Council's FMPs, and between state and federal jurisdictions, should be implemented through a consistent and common regulatory structure.

6.10.2 Vessel Safety

[6.5.1.4 Vessel Safety Considerations]

The Council will take safety issues into account in developing management recommendations, although some safety issues may not be under Council control. For example, the Council may set a fishing season such that participants are able to choose when they participate, but the Council cannot assure that weather conditions will be favorable to all participants throughout that season. The Council will review any new regulatory or management measures recommendations it makes to determine whether such recommendations;

- Improve the safety of fishing conditions for fishery participants.
- Offer new safety risks for fishery participants that could be remedied with revisions to the proposed requirements that would not otherwise weaken the effects of those requirements.

On safety issues, the Council shall consult with its EC and the public, and particularly with the U.S. Coast Guard on any search-and-rescue issues that might arise through proposed regulatory requirements.

6.10.3 Vessel and Gear Identification

[6.5.2.5 Vessel Identification]

The FMP authorizes vessel and gear identification requirements, which may be modified as necessary to facilitate enforcement and vessel recognition. Vessel marking requirements are described in federal

regulations at 50 CFR 660.305 and generally require that each vessel be clearly marked with its vessel number, such that it may be identified from the air or from approaching rescue/enforcement vessels at sea. Vessels may also be identified via transmissions of their position locations under a vessel monitoring system (VMS) program. Federal requirements implementing the Council's VMS program are found in regulation at 50 CFR 660.312. Gear identification requirements are described in federal regulations at 50 CFR 660.382 and 660.383 and generally require that fixed gear be marked with the associated vessel's number so that the gear's owner may be identified.

6.10.4 Prohibitions and Penalties

[11.7 Prohibitions]

Fishery participants are subject both to Federal prohibitions that apply nationwide and to those that apply just to participants in the West Coast groundfish fisheries. Federal regulations on nationwide fishery prohibitions are found at 50 CFR 600.725. Federal regulations on fishery prohibitions specific to the West Coast groundfish fisheries are found at 50 CFR 660.306. Participants in the West Coast groundfish fisheries are also subject to vessel operation and safety requirements of the U.S. Coast Guard (see federal regulations at Titles 33 and 46).

[11.9 Penalties]

Federal regulations at 50 CFR 600.735 state "Any person committing, or fishing vessel used in the commission of a violation of the Magnuson-Stevens Act or any other statute administered by NOAA and/or any regulation issued under the Magnuson-Stevens Act, is subject to the civil and criminal penalty provisions and civil forfeiture provisions of the Magnuson-Stevens Act, to this section, to 15 CFR part 904 (Civil Procedures), and to other applicable law."

7.06.6 ESSENTIAL FISH HABITAT

[6.6 Essential Fish Habitat]

7.1 How This FMP Addresses Provisions in the Magnuson-Stevens Act Relating to Essential Fish Habitat

[6.6.1 Magnuson-Stevens Act Directives Relating to Essential Fish Habitat]

■ The Magnuson-Stevens Act (as amended by the Sustainable Fisheries Act) requires FMPs to “describe and identify essential fish habitat..., minimize to the extent practicable adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat” (§303(a)(7)). The Act defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” NMFS interpreted this definition in its regulations as follows: “waters” include aquatic areas and their associated physical, chemical, and biological properties that are used by fish, and may include areas historically used by fish where appropriate; “substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities; “necessary” means “the habitat required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem”; and “spawning, breeding, feeding, or growth to maturity” covers the full life cycle of a species.

■ The description and identification of EFH must include habitat for an individual species, but may be designated for an assemblage of species, if appropriate to the FMP. Regulations at 50 CFR 600, Subpart J provides further guidance on these required FMP contents. These guidelines recommend that FMPs identify habitat areas of particular concern (HAPCs), which are specified areas of EFH meeting the criteria described in Section 7.3 of this FMP.

■ In addition to requiring FMPs to include practicable measures to minimize to the extent practicable the adverse effects of fishing, the MSA also provides a mechanism for NMFS and the Council to address nonfishing impacts to EFH.

||| These requirements are addressed as follows:

- Section 7.2 provides a succinct description of groundfish EFH. Appendix B to this FMP provides detailed descriptions of EFH for groundfish FMU species, including maps showing EFH for individual groundfish species/lifestages.
- Section 7.3 describes the groundfish HAPCs that have been identified by the Council, including the criteria used to identify those areas. Appendix B to this FMP provides additional specification of HAPCs.
- Section 7.4 provides an overview of the management measures available to the Council for minimizing the adverse impacts of fishing to EFH. Measures adopted by the Council are described in the appropriate sections of Chapter 6. Appendix C describes an assessment methodology for the effects of fishing on Pacific Coast groundfish EFH. This provides the basis for determining the need for management measures.
- Section 7.5 describes how federal agencies must consult with NMFS and/or the Council about any ongoing or proposed action they may authorize, fund, or undertake that may adversely affect any EFH. If the action would adversely affect EFH, NMFS will provide recommendations to conserve EFH. In support of these consultations, Appendix D describes nonfishing effects on EFH and recommended conservation measures.

- Section 7.6 describes how the Council will support habitat-related monitoring and research activities through the ongoing management program. Such programs will help close the substantial knowledge about many Pacific Coast groundfish species' habitat needs. In support of appropriate monitoring and research, Appendix B identifies many of those data gaps and makes suggestions regarding future research efforts, including needed research on fishing and nonfishing impacts to groundfish EFH.

Protecting, conserving, and enhancing EFH are long-term goals of the Council, and these EFH provisions of the FMP are an important element in the Council's commitment to a better understanding, and conservation and management, of Pacific Coast groundfish populations and their habitat needs.

7.2 Description and Identification of Essential Fish Habitat for Groundfish

[6.6.2 Definition of Essential Fish Habitat for Groundfish]

The Pacific Coast Groundfish FMP manages 80-plus species over a large and ecologically diverse area. Information on the life histories and habitats of these species varies in completeness, so while some species are well-studied, there is relatively little information on certain other species. Information about the habitats and life histories of the species managed by the FMP will certainly change over time, with varying degrees of information improvement for each species. For these reasons, it is impractical for the Council to include descriptions identifying EFH for each life stage of the managed species in the body of the FMP. Therefore, the FMP includes a description of the overall area identified as groundfish EFH and describes the assessment methodology supporting this designation. Life histories and EFH identifications for each of the individual species are provided in [Appendix B](#), which will be revised and updated to include new information as it becomes available. Such changes will not require FMP amendment. This framework approach is similar to the Council's stock assessment process, which annually uses the SAFE document to update information about groundfish stock status without amending the FMP. Like the SAFE document, any EFH updates will be reviewed in a Council public forum.

The overall extent of groundfish EFH for all FMU species is identified as all waters and sea bottom within the following area:

- depths less than 3,500 m (1,914 fathoms) to mean higher high water level (MHHW) or the upriver extent of saltwater intrusion, defined as upstream and landward to where ocean-derived salts measure less than 0.5 ppt during the period of average annual low flow
- seamounts in depths greater than 3,500 m as mapped in the EFH assessment GIS
- areas designated as HAPCs not already identified by the above criteria

This EFH identification is precautionary because it is based on the currently known maximum depth distribution of all life stages of FMU species. This precautionary approach is taken because uncertainty still exists about the relative value of different habitats to individual groundfish species/life stages, and thus the actual extent of groundfish EFH. For example, there were insufficient data to derive habitat suitability probability (HSP) values for all species/life stages. Furthermore, the data used to determine HSP values is subject to continued refinement. While recognizing these limitations, the 100% HSP area, all of which occurs in depths less than 3,500 m, is identified as a part of groundfish EFH, recognizing that the best scientific information demonstrates this area is particularly suitable groundfish habitat. While precautionary, groundfish EFH still constitutes an area considerably smaller than the entire West Coast EEZ.

Figure 7-1 shows the extent of this EFH identification.

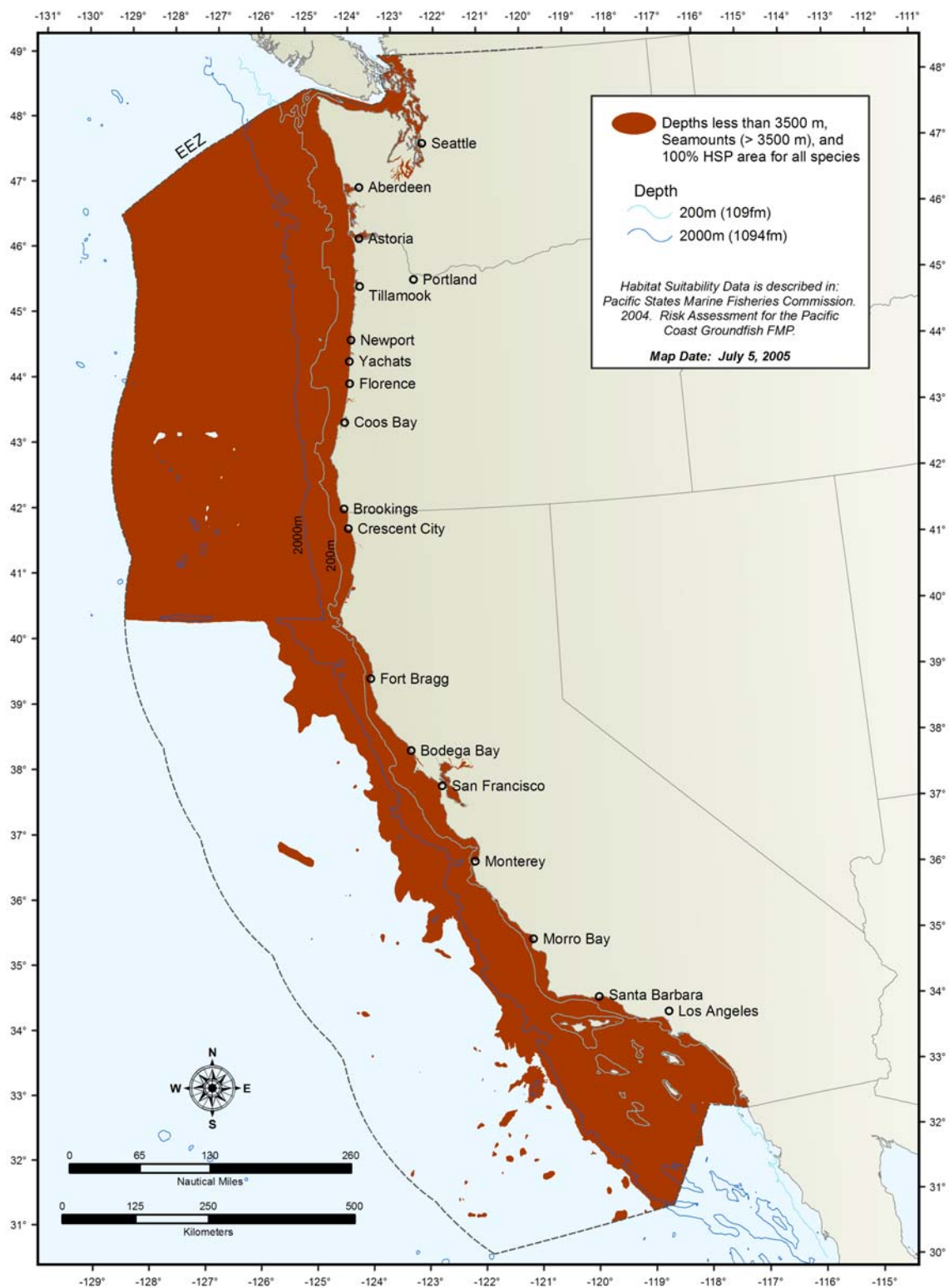


Figure 7-1. Groundfish EFH

7.2.1 Use of Habitat Suitability Probability to Identify EFH

The HSP, mentioned above, provides more evaluative detail about EFH for groundfish species. It was developed by NMFS and their outside contractors through a modeling and assessment process (MRAG Americas Inc., *et al.* 2004). This assessment differs slightly from the approach in these guidelines to organize the information necessary to describe and identify EFH. The guidelines recommend organizing the information by kind of data, and then suggest describing EFH based on the highest level of data. The HSP approach is a much more sophisticated method to analyze the information and provides a better way to scientifically analyze the information used to describe and identify EFH. The model considers basic pieces of information used to describe and identify EFH: location, depth, and substrate. It then determines areas used by the different life stages of groundfish, provides profiles for individual species by life stage, combines them in a GIS analysis into an ecosystem level set of fish assemblages, and predicts groundfish habitat. By using this approach to analyzing the information, HSP provides a better method to analyze the EFH information and develop the description and identification of EFH than the method outlined in the guidelines at 50 CFR 600.815. This is because it takes advantage of computer analyses of a large amount of information that is organized in such a way that it provides a clear understanding of the relationship between groundfish and habitat. The EFH Model used to develop HSP values for individual groundfish species/life stage is further described in Appendix B.

The assessment consolidates the best available ecological, environmental, and fisheries information into various databases, including a geographic information system (GIS) and the habitat use database (HUD). The following types of data were used in this process to identify groundfish EFH:

- Geological substrate (GIS)
- Estuaries (GIS)
- Canopy kelp (GIS)
- Seagrass (GIS)
- Structure-forming invertebrate information
- Bathymetric data (GIS)
- Latitude (GIS)
- Information on pelagic habitat
- Data quality (GIS and other databases)
- Information on the functional relationships between fish and habitat (including a literature review consolidated in the HUD).

Ideally, EFH would be defined by delineating habitat in terms of its contribution to spawning, breeding, feeding, growth to maturity, and production; however, comprehensive data on these functions are not available. Because of these data limitations, a model was developed to predict an overall measure of the suitability of habitat in particular locations for as many groundfish species as possible. This model uses available information on the distribution and habitat-related density of species. Where possible, the suitability of habitat was measured using the occurrence of fish species in NMFS trawl survey catches. For species not well represented in the trawl catches, information from the scientific literature was used.

The model characterizes habitat in terms of three variables: depth, latitude, and substrate (both physical and biogenic substrate, where possible). For the purposes of the model, these three characteristics provide a reasonable representation of the essential features of habitat that influence the occurrence of fish. Depending on these characteristics and the observed distributions of fish in relation to them, each location (a parcel or polygon of habitat in the GIS) is assigned a suitability value between 0 and 100%. This is the HSP, which was calculated for as many species and life stages in the FMU as possible, based on available data. These scores and the differences between scores for different locations are then used to develop a proxy for the areas

that can be regarded as “essential.” The higher the HSP, the more likely the habitat is suitable for the habitat needs of a given groundfish species.

The EFH assessment model provides spatially explicit estimates of HSP for 160 groundfish species/life stage combinations, including the adults of all FMU species. Distribution ranges for depth and latitude were derived where possible from in-situ observations of occurrence in NMFS trawl survey catches. Where survey data were insufficient, depth and latitude ranges were extracted from reports and papers in the scientific literature. Preferences for substrate types were also taken from the scientific literature. The HSP values for each habitat polygon are mapped using GIS software. EFH regulations at 50 CFR 600, Subpart J suggest that inferences may be made about the extent of EFH, through appropriate means, where data are lacking to determine EFH for each species and life stage. Such is the case for the current EFH identification, which infers that no groundfish species/life stage will occupy EFH beyond the currently-known maximum depth for groundfish species, the basis for identifying EFH out to a maximum depth of 3,500 m. This inference is based on the supposition that the life history characteristics of species for which information is unavailable are sufficiently similar to the characteristics of those species for which information is available such that the identified groundfish EFH encompasses all species.

HSP values, assigned to discrete areas represented by the polygons in the GIS, can be used to better understand where favorable groundfish habitat occurs. The EFH identification described above, all waters and bottom areas in depths less than 3,500 m, is a precautionary approach encompassing the maximum range of groundfish species within the management area, based on the best scientific information. As noted above, this precautionary identification has been adopted because there is not enough information to determine the relative value of different habitats for all groundfish species/life stages. Therefore, EFH for all groundfish is identified in a manner that provides the greatest opportunity to apply conservation measures. Within this precautionary EFH identification it is recognized that HSP values provide additional information about groundfish EFH. For this reason all areas assigned an HSP value greater than 0% for any given species are included as a subset of this broader, precautionary identification of groundfish EFH. The model and resulting HSP values also can be used to support future habitat-related management decisions, which may involve considering tradeoffs between management effects on different habitats. These tradeoffs could be compared with respect to the suitability (HSP value) of different areas potentially affected by the management action, for example.

In addition to supporting the description and identification of EFH for the individual species and life stages, these assessment-related techniques can be used as a basis for an ecosystem approach to management. For example, the HSP profiles for individual species/life stages can be combined by GIS analyses into ecosystem-level fish assemblages to investigate and predict environmental consequences of proposed projects.

As new data become available, they can be incorporated into the assessment to refine and improve HSP modeling. The Council supports and coordinates this effort through its standing committees and any ad hoc committees that may be formed for this purpose.

7.3 Habitat Areas of Particular Concern

EFH guidelines published in Federal regulations identify habitat areas of particular concern as types or areas of habitat within EFH that are identified based on one or more of the following considerations:

- The importance of the ecological function provided by the habitat.
- The extent to which the habitat is sensitive to human-induced environmental degradation.
- Whether, and to what extent, development activities are or will be stressing the habitat type.
- The rarity of the habitat type.

(50 CFR 600.815(a)(8))

Based on these considerations, the Council has designated both areas and habitat types as HAPCs. In some cases, HAPCs identified by means of specific habitat type may overlap with the designation of a specific area. The HAPC designation covers the net area identified by habitat type or area. Designating HAPCs facilitates the consultation process described in Section 7.5 by identifying ecologically important, sensitive, stressed or rare habitats that should be given particular attention when considering potential nonfishing impacts. Their identification is the principal way in which the Council can address these impacts.

HAPCs based on habitat type may vary in location and extent over time. For this reason, the mapped extent of these areas offers only a first approximation of their location. Defining criteria of habitat-type HAPCs are described below, which may be applied in specific circumstances to determine whether a given area is designated as groundfish HAPC. HAPCs include all waters, substrates, and associated biological communities falling within the area defined by the criteria below.

Figure 7.2 is a map showing the location of these HAPCs. For HAPCs defined by habitat type, as opposed to discrete areas, this map offers a first approximation of their location and extent. The precision of the underlying data used to create these maps, and the fact that the extent of HAPCs defined by key benthic organisms (canopy kelp, seagrass) can change along with changes in the distribution of these organisms, means that at fine scales the map may not accurately represent their location and extent. Defining criteria are provided in the following descriptions of HAPCs, which can be used in conjunction with the map to determine if a specific location is within one of these HAPCs. The areas of interest HAPCs and oil platform HAPCs are defined by discrete boundaries. **The coordinates defining these boundaries are listed in Appendix B.**

7.3.1 *Designated HAPCs*

Figure 7-2 shows the location and extent of the HAPCs described below.

7.3.1.1 Estuaries

Estuaries are protected nearshore areas such as bays, sounds, inlets, and river mouths, influenced by ocean and freshwater. Because of tidal cycles and freshwater runoff, salinity varies within estuaries and results in great diversity, offering freshwater, brackish and marine habitats within close proximity (Haertel and Osterberg 1967). Estuaries tend to be shallow, protected, nutrient rich, and are biologically productive, providing important habitat for marine organisms, including groundfish.

Defining characteristics: The inland extent of the estuary HAPC is defined as MHHW, or the upriver extent of saltwater intrusion, defined as upstream and landward to where ocean-derived salts measure less than 0.5 ppt during the period of average annual low flow. The seaward extent is an imaginary line closing the mouth of a river, bay, or sound; and to the seaward limit of wetland emergents, shrubs, or trees occurring beyond the lines closing rivers, bays, or sounds. This HAPC also includes those estuary-influenced offshore areas of continuously diluted seawater. This definition is based on Cowardin, et al. (1979)

7.3.1.2 Canopy Kelp

Of the habitats associated with the rocky substrate on the continental shelf, kelp forests are of primary importance to the ecosystem and serve as important groundfish habitat. Kelp forest communities are found relatively close to shore along the open coast. These subtidal communities provide vertically-structured

habitat throughout the water column: a canopy of tangled blades from the surface to a depth of 10 feet, a mid-water, stipe region, and the holdfast region at the seafloor. Kelp stands provide nurseries, feeding grounds, and shelter to a variety of groundfish species and their prey (Ebeling, *et al.* 1980; Feder, *et al.* 1974). Giant kelp communities are highly productive relative to other habitats, including wetlands, shallow and deep sand bottoms, and rock-bottom artificial reefs (Bond, *et al.* 1998). Their net primary production is an important component to the energy flow within food webs. Foster and Schiel (1985) reported that the net primary productivity of kelp beds may be the highest of any marine community. The net primary production of seaweeds in a kelp forest is available to consumers as living tissue on attached plants, as drift in the form of whole plants or detached pieces, and as dissolved organic matter exuded by attached and drifting plants (Foster and Schiel 1985).

GIS data for the floating kelp species, *Macrocystis* spp. and *Nereocystis* sp., are available from state agencies in Washington, Oregon, and California. These data have been compiled into a comprehensive data layer delineating kelp beds along the West Coast. The kelp source data were provided for each state by Washington Department of Natural Resources, Oregon Department of Fish and Game, and California Department of Fish and Game. Source data were collected using a variety of remote sensing techniques, including aerial photos and multispectral imagery. Because kelp abundance and distribution is highly variable, these data do not necessarily represent current conditions. However, data from multiple years were compiled together with the assumption that these data would indicate areas where kelp has been known to occur. Washington State has the most comprehensive database, covering 10 years (1989-1992, 1994-2000) of annual surveys of the Straits of Juan de Fuca and the Pacific Coast. Oregon did a coastwide survey in 1990 and then surveyed select reefs off southern Oregon in 1996-1999. A comprehensive kelp survey in California was performed in 1989 and additional surveys of most of the coastline occurred in 1999 and 2002.

Defining characteristics: The canopy kelp HAPC includes those waters, substrate, and other biogenic habitat associated with canopy-forming kelp species (e.g., *Macrocystis* spp. and *Nereocystis* sp.).

7.3.1.3 Seagrass

Seagrass species found on the West Coast of the U.S. include eelgrass species (*Zostera* spp., widgeongrass (*Ruppia maritima*), and surfgrass (*Phyllospadix* spp.). These grasses are vascular plants, not seaweeds, forming dense beds of leafy shoots year-round in the lower intertidal and subtidal areas. Eelgrass is found on soft-bottom substrates in intertidal and shallow subtidal areas of estuaries and occasionally in other nearshore areas, such as the Channel Islands and Santa Barbara littoral. Surfgrass is found on hard-bottom substrates along higher energy coasts. Studies have shown seagrass beds to be among the areas of highest primary productivity in the world (Herke and Rogers 1993; Hoss and Thayer 1993).

Despite their known ecological importance for many commercial species, seagrass beds have not been as comprehensively mapped as kelp beds. Wyllie-Echeverria and Ackerman (2003) published an excellent coastwide assessment of seagrass that identifies sites known to support seagrass and estimates of seagrass bed areas; however, their report does not compile existing GIS data. GIS data for seagrass beds were located and compiled as part of the groundfish EFH assessment process.

Eelgrass mapping projects have been undertaken for many estuaries along the West Coast. These mapping projects are generally done for a particular estuary, and many different mapping methods and mapping scales have been used. Therefore, the data that have been compiled for eelgrass beds are an incomplete view of eelgrass distribution along the West Coast. Data depicting surfgrass distribution are very limited—the only GIS data showing surfgrass are for the San Diego area.

Defining characteristics: The seagrass HAPC includes those waters, substrate, and other biogenic features

associated with eelgrass species (*Zostera* spp.), widgeongrass (*Ruppia maritima*), or surfgrass (*Phyllospadix* spp.).⁴

7.3.1.4 Rocky Reefs

Rocky habitats are generally categorized as either nearshore or offshore in reference to the proximity of the habitat to the coastline. Rocky habitat may be composed of bedrock, boulders, or smaller rocks, such as cobble and gravel. Hard substrates are one of the least abundant benthic habitats, yet they are among the most important habitats for groundfish.

Defining characteristics: The rocky reefs HAPC includes those waters, substrates and other biogenic features associated with hard substrate (bedrock, boulders, cobble, gravel, etc.) to MHHW. A first approximation of its extent is provided by the substrate data in the groundfish EFH assessment GIS. However, at finer scales, through direct observation, it may be possible to further distinguish between hard and soft substrate in order to define the extent of this HAPC.

7.3.1.5 Areas of Interest

Areas of interest are discrete areas that are of special interest due to their unique geological and ecological characteristics. The following areas of interest are designated HAPCs:

- Off of Washington: All waters and sea bottom in state waters shoreward from the three nautical mile boundary of the territorial sea shoreward to MHHW.
- Off of Oregon: Daisy Bank/Nelson Island, Thompson Seamount, President Jackson Seamount
- Off of California: all seamounts, including Gumdrops Seamount, Pioneer Seamount, Guide Seamount, Taney Seamount, Davidson Seamount, and San Juan Seamount; Mendocino Ridge; Cordell Bank; Monterey Canyon; specific areas in the Federal Waters of the CINMS; specific areas of the Cowcod Conservation Area

The Washington state waters HAPC encompasses a variety of habitats important to groundfish, including other HAPCs such as rocky reef habitat supporting juvenile rockfish (primarily north of Grays Harbor) and estuary areas supporting numerous economically and ecologically important species, including juvenile lingcod and English sole. Sandy substrates within state waters (primarily south of Grays Harbor) are important habitat for juvenile flatfish. A large proportion of this area is also contained within the Olympic Coast National Marine Sanctuary and three offshore national wildlife refuges, which provide additional levels of protection to these sensitive nearshore coastal areas.

Seamounts and canyons are prominent features in the coastal underwater landscape, and may be important in rockfish management because “rockfish distributions closely match the bathymetry of coastal waters” (Williams and Ralston 2002).

Seamounts rise steeply to heights of over 1,000 m from their base and are typically formed of hard volcanic substrate. They are unique in that they tend to create complex current patterns (Lavelle, *et al.* 2003; Mullineaux and Mills 1997) and have highly localized species distributions (de Forges, *et al.* 2000). Seamounts have relatively high biodiversity and up to a third of species occurring on these features may be endemic (de Forges, *et al.* 2000). Because the faunal assemblages on these features are still poorly studied, and species new to science are likely to be found, human activities affecting these features need careful

⁴ The extent and effect of non-native species in seagrass HAPCs, such as *Zostera japonica*, may be considered in conservation recommendations NMFS makes to other federal and state agencies (see Section 7.5)

management. Currents generated by seamounts retain rockfish larvae (Dower and Perry 2001; Mullineaux and Mills 1997) and zooplankton, a principal food source for rockfish (Genin, *et al.* 1988; Haury, *et al.* 2000). Several species observed on seamounts, such as deep-sea corals, are particularly vulnerable to anthropogenic impacts (Monterey Bay National Marine Sanctuary 2005).

Canyons are complex habitats that may provide a variety of ecological functions. Shelf-edge canyons have enhanced biomass due to onshore transport and high concentrations of zooplankton, a principal food source of juvenile and adult rockfish (Brodeur 2001). Canyons may have hard and soft substrate and are high relief areas that can provide refuge for fish, and localized populations of groundfish may take advantage of the protection afforded by canyons and the structure-forming invertebrate megafauna that grow there (Monterey Bay National Marine Sanctuary 2005). A canyon in the North Pacific was observed to have dense aggregations of rockfish associated with sea whips (*Halipteris willemoesi*), while damaged sea whip “forests” had far fewer rockfish (Brodeur 2001).

Daisy Bank is a highly unique geological feature that occurs in federal waters due west of Newport, Oregon and appears to play a unique and potentially rare ecological role for groundfish and large invertebrate sponge species. The bank was observed in 1990 to support more than 6,000 juvenile rockfish per hectare; a number thirty times higher than those observed on adjacent banks during the same study period. The same study also indicated that Daisy Bank seems to support more and larger lingcod and large sponges than other nearby banks (Mark Hixon, pers. comm., August 2004).

Discrete areas at Cordell Bank and the Channel Island National Marine Sanctuary, and the Cowcod Conservation Areas, are designated HAPCs because they are afforded high levels of protection through their inclusion in a National Marine Sanctuary and/or designation as an ecologically important closed area (see Section 7.4). These designations both reflect and enhance their value as groundfish habitat.

Defining characteristics: As noted above, the shoreward boundary of the Washington State waters HAPC is defined by MHHW while the seaward boundary is the extent of the three-mile territorial sea. The remaining area-based HAPCs are defined by their mapped boundaries in the EFH assessment GIS. The coordinates defining these boundaries may be found in Appendix B to this FMP.

7.3.1.6 Oil Production Platforms

Waters and substrate associated with the platform jackets of 13 specified oil production platforms in Southern California waters are designated groundfish HAPC. (See Table 7-1 for the names and locations of these platforms.) Surveys demonstrate that high concentrations of groundfish have been observed in association with these platforms, including overfished species such as bocaccio and cowcod (Love, *et al.* 2003). In addition to providing suitable habitat, most of these structures are not fished and act as de facto reserves. The platforms rise steeply from the bottom and provide unique high-relief habitat.

Defining characteristics: The HAPC area is defined by a circle around each platform whose center is the published location given by latitude-longitude coordinates (Love, *et al.* 2003, Appendix 1) with a radius 1.5 times the maximum published platform jacket dimension (Love, *et al.* 2003, Appendix 1).

7.3.2 Process for Modifying Existing or Designating New HAPCs

Recognizing that new scientific information could reveal other important habitat areas that should be designated HAPCs, the Council may modify or eliminate an existing HAPC or designate a new HAPC through the process described below. This process allows organizations and individuals to petition the Council at any time to consider a new designation and ensures, provided they submit the required information

described below, their proposal will be considered by the Council. The process includes the following elements, which may be described in more detail in Council Operating Procedures:

1. A petitioner submits a proposal to eliminate or modify an existing HAPC, or designate a new HAPC, by letter to the Chairman and Executive Director of the Council. Proposals must include a description of: (a) for new HAPCs, the location of the HAPC, defined by specified geographic characteristics such as coordinates, depth contours, or distinct biogeographic characteristics; (b) for new HAPCs, how the HAPC meets the criteria specified in regulations at 50 CFR 600.815 (a)(8) or for changes to existing HAPCs how such a change would better meet these criteria; and (c) a preliminary assessment of potential biological and socioeconomic effects of the proposed change or new designation.
2. Council/NMFS staffs determine whether the proposal contains the mandatory components outlined in step one. If this technical review determines that the proposal is inadequate, staff return it to the petitioner for revision and resubmission. If it is determined adequate, staff forward it to the Council for full consideration over three Council meetings as described below.
3. At the first meeting the Council establishes a timeline for consideration, including merit review by the HC and the SSC.
4. At the second meeting the HC and SSC provide their merit review to the Council. Depending on the results of this review, the Council directs staff to begin developing any documentation necessary for implementation. The proposal is also be forwarded to other advisory bodies for additional review.
5. At the third meeting the Council receives advisory body reports, reviews implementing documentation, and decides whether to approve an FMP amendment for Secretarial review.

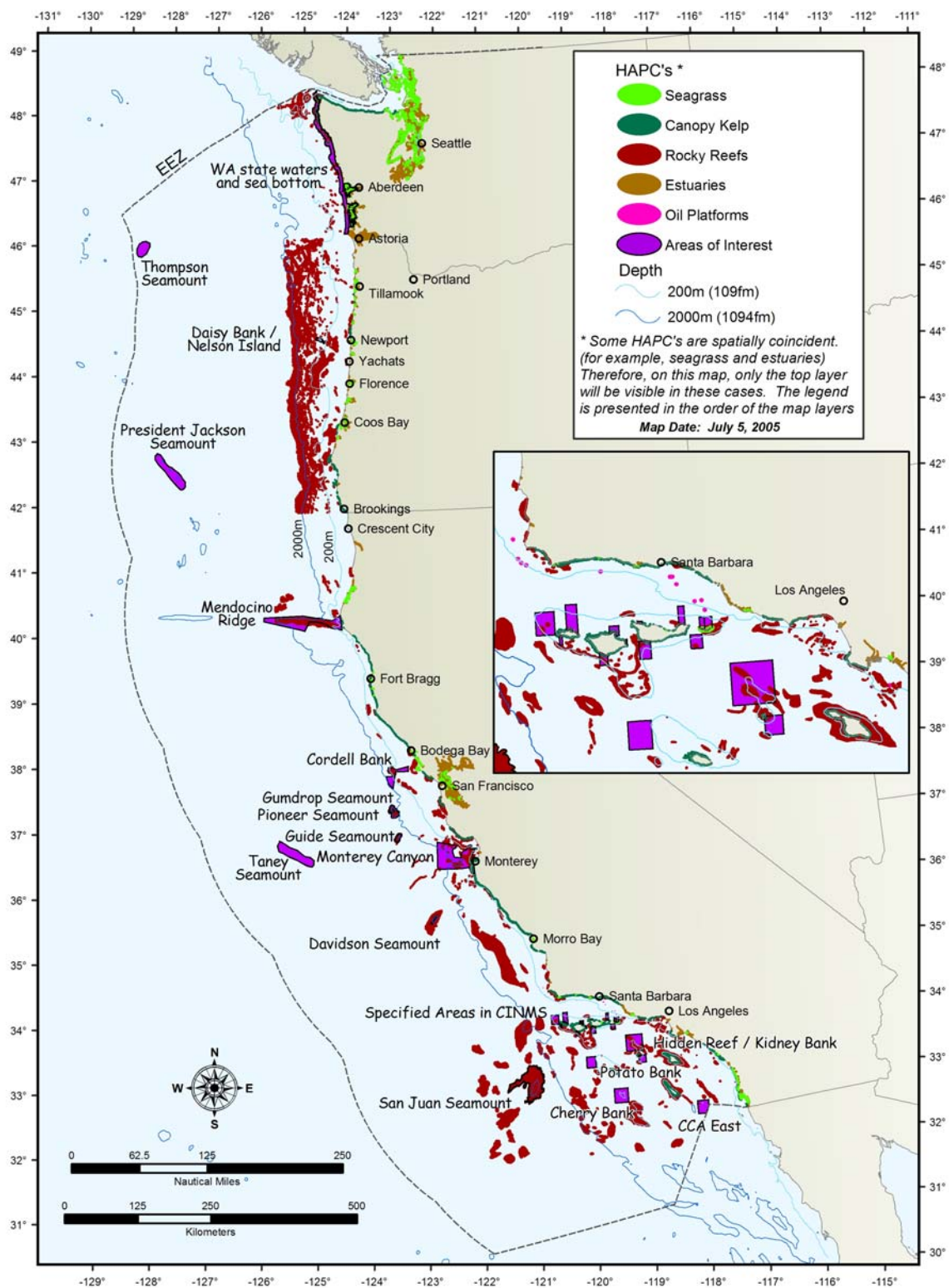


Figure 7-2. Groundfish HAPCs

7.4 Management Measures To Minimize Adverse Impacts on Essential Fish Habitat from Fishing

[6.6.3 Management Measures To Minimize Adverse Impacts on Essential Fish Habitat from Fishing]

Chapter 6 describes the range of measures available to the Council for managing groundfish fisheries. The include measures with permanent effect and those that may be periodically adjusted in concert with the specification of harvest levels described in Chapter 5. Management measures are typically established through federal rulemaking, using one of the procedures described in Section 6.2. Some of the management measures described in Chapter 6 have been implemented specifically to mitigate adverse impacts to EFH while others may have another primary purpose (such as bycatch reduction) but may have a corollary mitigating effect on adverse impacts to EFH. Those measures specifically intended to conserve EFH are summarized below by reference to the relevant section in Chapter 6.

Three broad categories of management measures are recognized as being effective for mitigating adverse impacts to EFH: gear modifications, closed areas, and overall reductions of fishing effort (National Research Council 2002). Section 6.6 defines legal groundfish gear and describes restrictions on their use. The Council has established several prohibitions and restrictions on gear to mitigate adverse impacts to EFH. These include restrictions on trawl footrope size, and prohibition of the use of dredges and beam trawls in the management area. Section 6.8 describes time/area closures, including the trawl footprint closure and ecologically important habitat closures, implemented to mitigate adverse impacts to EFH. The bottom trawl footprint closure prohibits the use of bottom trawl gear in depths greater than 700 fathoms, preventing the expansion of the use of this gear type into where its historical use has been limited. Additional ecologically important habitat areas are also closed to specified gear types shoreward of the trawl footprint boundary. These are areas that are thought to be especially ecologically important or vulnerable to the effects of fishing based on information about substrate type, topography, and the occurrence of biogenic habitat. Section 6.9 describes the range of measures available to control fishing capacity. Reductions in fishing capacity, which may be loosely defined as the number, size, and configuration of vessels participating in a fishery, may reduce overall fishing effort. Reducing fishing effort is relevant to mitigating the effects of fishing on EFH if the areal or temporal extent of gear contact with EFH is reduced. Although the rationale for measures that result in capacity reduction may be to prevent overfishing, reduce bycatch, or increase economic efficiency, they may have a corollary mitigating effect for EFH impacts. The Council will consider any such mitigating effects when developing capacity reduction programs or measures.

In determining whether it is practicable to minimize an adverse effect from fishing, the Council will consider whether, and to what extent, the fishing activity is adversely affecting EFH, the nature and extent of the adverse effect on EFH, and whether management measures are practicable. The Council will consider the long- and short-term costs and benefits to the fishery and to EFH, along with any other factors consistent with national standard 7.

As described in Section 6.2.5, Indian treaty rights apply in U & A grounds of the Makah, Ho, and Quileute Tribes, and the Quinalt Indian Nation. In recognition of the sovereign status and co-manager role of these Indian tribes over shared Federal and tribal fishery resources, the regulations at 50 CFR 660.324(d) establish procedures that will be followed for the development of regulations regarding tribal fisheries within the U & A grounds. They state that the agency will develop regulations in consultation with the affected tribe(s) and insofar as possible, with tribal consensus. Application of management measures intended to mitigate the adverse impacts of fishing on EFH within U & A grounds will be subject to these procedures.

7.5 EFH Coordination, Consultation, and Recommendations

[6.6.1 Magnuson-Stevens Act Directives Relating to Essential Fish Habitat]

The MSA (§305(b)) also provides a mechanism for NMFS and Council to address nonfishing impacts to EFH. Federal agencies are required to consult with NMFS on all activities, and proposed activities, authorized, funded, or undertaken by the agency that may adversely affect EFH, whether it occurs within or outside EFH. (For example, certain terrestrial activities may adversely affect EFH.) NMFS must provide recommendations to conserve EFH to federal agencies undertaking such activities. Federal agencies must respond within 30 days of receiving conservation recommendations from NMFS, describing measures to avoid, mitigate, or offset the impact of the proposed action on EFH. If the response is inconsistent with NMFS's conservation recommendations, the agency will explain why it did not follow them.

NMFS must also provide recommendations to conserve EFH to state agencies if it receives information on their actions. However, they are not required to initiate consultation with NMFS, nor are they required to respond to any recommendations provided by NMFS.

The Council may provide recommendations on actions that may affect habitat, including EFH. Such recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. The Council will encourage federal agencies conducting or authorizing work that may adversely affect groundfish EFH to minimize disturbance to EFH. The Council must provide recommendations if the action is likely to substantially affect salmon habitat or EFH.

Whenever possible, EFH consultations will be combined with other interagency consultations and environmental review procedures, which may be required under the Endangered Species Act, Clean Water Act, National Environmental Policy Act, Fish and Wildlife Coordination Act, Federal Power Act, Rivers and Harbors Act, or other statutes. EFH consultation may be either programmatic (concerning agency programs or policies) or project-specific. Programmatic consultations involve broad Federal actions as defined under NEPA (40 CFR 1502.4(b)), such as the adoption of new programs or policies. Programmatic actions may encompass several project-specific actions sharing common geographic scope, project elements, or timing. When appropriate, NMFS will use programmatic consultations to consider related projects, thereby eliminating repetitive discussions and helping to focus on the appropriate level of analysis. Considering the broad geographic scope of groundfish EFH, this approach can help address a wide variety of related development activities while also considering their cumulative effects.

7.6 Review and Revision of Essential Fish Habitat Definitions and Descriptions and Identification

[6.6.4 Review and Revision of Essential Fish Habitat Definitions and Descriptions]

The Council will periodically review the available information on EFH descriptions and identification, HAPC designations, and information on fishing impacts and nonfishing impacts included in this FMP at least every five years, and include a New information may be included in the annual SAFE document or similar document and, if necessary, the FMP may be amended. A review and update of available information will be conducted at least once every five years as appropriate, but the Council may schedule more frequent reviews in response to recommendation by the Secretary or for other reasons.

7.7 Habitat-related Research and Monitoring

The five-year review cycle described above accommodates progress in scientific understanding of marine habitat. New data on the habitat needs of groundfish species will improve the assessment model described in Section 7.2.1. Better information about the location, function, and consequences of human activity on habitat

underpins efforts to conserve EFH and could enable more precise quantification of adverse impacts to EFH resulting from human activities, including fishing. The Council supports the use of existing research and monitoring programs to increase scientific understanding about EFH. Where practicable, these programs may be supplemented or modified to gather habitat-related information.

Currently, groundfish limited entry trawl vessels are required to record information on the time and location of fishing activities, along with estimates of catch composition, in a logbook. Some of these data are entered into the Pacific Fisheries Information Network (PacFIN) data system and may be accessed by managers. Information on fishing location has proved invaluable to managers. These data show the spatial distribution of fishing effort, which can be used to evaluate what EFH area may be adversely affected by fishing. The Council supports expansion of the logbook program to cover other fishery sectors besides groundfish limited entry trawl, where practicable. The Council also supports entering ore of the existing information gathered by means of logbooks, such as the haul-back position of trawl tows, into the data system.

This FMP authorizes the use of vessel monitoring system (VMS) programs (see Section 6.4.2). As of 2004, specified groundfish limited entry permitted vessels were required to carry VMS transceivers in order to enforce the Rockfish Conservation Areas. Because the bottom trawl footprint closure and ecologically sensitive area closures (see Sections 7.4 and 6.8) apply to vessels beyond those holding groundfish limited entry permits, the Council will consider expansion of this requirement to other fishery sectors, as appropriate, to effectively enforce habitat-related closed areas. VMS data also could be valuable in continuing efforts to assess the effects of fishing on EFH if information on track lines of trawl or fixed gear sets could be accessed for research purposes.

Establishing research sites, unaffected by fishing, could be used in comparative studies t to better understand the effects of fishing on habitat. Area closures established to manage bycatch, promote stock rebuilding, protect habitat, and for other reasons, offer opportunities to measure the length of time needed for habitat features and function to recover. Over time these sites could also be compared with sites where fishing is ongoing in order to research the effects of fishing. The Council will support, through the work of its advisory bodies, such as the Habitat Committee, efforts to identify discrete sites within closed areas in order to focus research efforts. By encouraging research at identified sites, results can be more easily compared. Such a system or research sites should include a representative sample of habitat types in order to allow comparison of the effects of fishing across these different types.

78.0 EXPERIMENTAL FISHERIES

~~Among the objectives of this FMP is to provide for the orderly development of the domestic groundfish fisheries, including promotion of new domestic fisheries, or otherwise contribute to effective management of the stock. In order to accomplish this objective, it is desirable to permit limited domestic experimental fishing (recreational or commercial) for groundfish species covered by this plan. This provision is intended to promote increased utilization of underutilized species, realize the expansion potential of the domestic groundfish fishery, and increase the harvest efficiency of the fishery consistent with the Magnuson-Stevens Act and the~~

Experimental fisheries may be useful to the Council in allowing members of the public to work with government agencies to bring new fishery management ideas into the Council process. For example, there may be some modification to current gear types that will reduce the effects of that gear on habitat, or reduces bycatch rates with that gear in otherwise closed areas. The Council supports the use of exempted fishing permits (EFPs) to promote public and agency innovation in furthering the FMP's fishery management goals of this FMP goal and objectives. Experimental fishing will be conducted under Federal exempted fishing permits (EFPs) issued under Section 303(b)(1) of the Magnuson-Stevens Act.

~~The Regional Director/Administrator may authorize, for limited experimental purposes, the direct or incidental harvest of groundfish managed under this FMP which that would otherwise be prohibited. No experimental fishing may be conducted unless authorized by an EFP issued by the Regional Director/Administrator to the participating vessel in accordance with the criteria and procedures specified in this section. EFPs will be issued without charge. EFPs may be issued to Federal or state agencies, marine fish commissions, or other entities, including individuals. An applicant for an EFP need not be the owner or operator of the vessel(s) for which the EFP is requested. Nothing in this section is intended to inhibit the authority of the Council or any other fishery management entity from requesting that the Regional Director/Administrator consider issuance of EFPs for a particular experiment in advance of the Regional Director's/Administrator's receipt of applications for EFPs to participate in that experiment.~~

EFPs that would result in the directed or incidental take of groundfish should be reviewed through the Council process prior to application to NMFS. The Council review process allows the Council determine whether portions of the harvest specifications of any groundfish species or species group would need to be set aside for harvest expected to be taken under EFPs. EFP proposals must contain a mechanism, such as at-sea fishery monitoring, to ensure that the harvest limits for targeted and incidental species are not exceeded and are accurately accounted for. Also, EFP proposals must include a description of the proposed data collection and analysis methodology used to measure whether the EFP objectives will be met.

EFP applicants may have their proposals reviewed through the Council process in accordance with Council Operating Procedure #19, Protocol for Consideration of EFPs for Groundfish Fisheries. This protocol includes requirements for EFP submission, proposal contents, review and approval, and progress reporting. The Council will give priority consideration to those EFP applications that:

1. Emphasize resource conservation and management with a focus on bycatch reduction (highest priority).
2. Encourage full retention of fishery mortalities.
3. Involve data collection on fisheries stocks and/or habitat.
4. Encourage innovative gear modifications and fishing strategies to reduce bycatch.
5. Encourage the development of new market opportunities.
6. Explore the use of higher trip limits or other incentives to increase utilization of underutilized species while reducing bycatch of non-target species.

Criteria and procedures for the issuance of EFPs ~~are~~ apply nationwide and are found in Federal regulations at 50 CFR 600.745 *[current as of January 1, 2005]*:

1. Applicants must submit a completed application in writing to the Regional ~~Director~~Administrator at least 60 days prior to the proposed effective date of the permit. The application must include, but is not limited to, the following information:
 - a. The date of the application;
 - b. The applicant's name, mailing address, and telephone number;
 - c. A statement of the purposes and goals of the ~~experiment~~exempted fishery for which an EFP is needed, including a ~~general description of the arrangements for disposition of all species harvested under the EFP;~~
 - ~~d. Valid justification for why issuance of the EFP is warranted;~~
 - ~~e. A statement of whether the proposed experimental fishing has broader significance than the applicant's individual goals;~~
 - ~~f.~~d. For each vessel to be covered by the EFP:
 - ~~(1) vessel name;~~
 - ~~(2)~~(1) A copy of the USCG documentation, state license, or registration of each vessel, or the information contained on the appropriate document;
 - ~~(3)~~ The current name, address, and telephone number of owner and master;
 - ~~(4) Coast Guard documentation, state license, or registration number;~~
 - ~~(5) home port;~~
 - ~~(6) length of vessel;~~
 - ~~(7) net tonnage;~~
 - ~~(8) gross tonnage;~~
 - ~~g. A description of the~~
 - e. The species (target and incidental) expected to be harvested under the EFP and, the amount(s) of such harvest necessary to conduct the experiment; h. exempted fishing, the arrangements for disposition of all regulations species harvested under the EFP, and any anticipated impacts on marine mammals and endangered species.
 - h. For each vessel covered by the EFP, the approximate time(s) and place(s) fishing will take place, and the type, size and amount of gear to be used; and——
 - i. The signature of the applicant.

The Regional ~~Director~~Administrator may request from an applicant additional information necessary to make the determinations required under this section.

2. The Regional ~~Director~~Administrator will review each application and will make a preliminary determination whether or not the application contains all of the required information and constitutes a ~~valid experimental program activity~~ appropriate for further consideration. If the Regional ~~Director~~Administrator finds any application does not warrant further consideration, ~~he shall notify~~ both the applicant and the Council will be notified in writing of the reasons for ~~his~~the decision. If the Regional ~~Director~~Administrator determines that any application warrants further consideration, ~~he will publish a notice of notification~~ receipt of the application will be published in the *Federal Register* with a brief description of the proposal, and will give interested the intent of NMFS to issue an EFP. Interested persons an will be given a 15- to 45-day opportunity to comment and/or comments will be requested during public testimony at a Council meeting. The ~~notice~~notification may establish a cutoff date for receipt of additional applications to participate in the same or a similar ~~experiment~~exempted fishing activity.

The Regional ~~Director~~Administrator also will forward copies of the application to the ~~Pacific Fishery Management Council~~, the United States Coast Guard, and the fishery management agencies of Oregon, Washington, California, and Idaho, accompanied by the following information:

- a. ~~The current utilization of domestic annual harvesting and processing capacity (including existing experimental harvesting, if any) of~~The effect of the proposed EFP on the target and incidental species, including the effect on any OY; —
 - b. A citation of the regulation or regulations ~~which that, absent without~~ the EFP, would prohibit the proposed activity; and
 - c. Biological information relevant to the proposal, including appropriate statements of environmental impacts, including impacts on marine mammals and threatened or endangered species.
3. At a Council meeting following receipt of a complete application, the Regional ~~Director~~Administrator may choose to consult with the Council and the directors of the state fishery management agencies concerning the permit application. The Council shall notify the applicant in advance of the meeting, if any, at which the application will be considered and invite the applicant to appear in support of the application if the applicant desires.
4. As soon as practicable after receiving responses from the agencies identified above, or after consultation, if any, in paragraph 3 above, the Regional ~~Director~~Administrator shall notify the applicant in writing of his decision to grant or deny the EFP, and, if denied, the reasons for the denial. Grounds ~~to deny issuance~~for denial of an EFP include, but are not limited to, the following:
 - a. The applicant has failed to disclose material information required, or has made false statements as to any material fact, in connection with his or her application; or—
 - b. According to the best scientific information available, the harvest to be conducted under the permit would detrimentally affect the well-being of the stock of any regulated species of fish, marine mammal, or threatened or endangered species in a significant way; or —
 - c. Issuance of the EFP ~~would inequitably allocate fishing privileges among domestic fishermen or~~ would have economic allocation as its sole purpose; or
 - d. Activities to be conducted under the EFP would be inconsistent with the intent of ~~this section~~national goals for Magnuson-Stevens Act implementation or the management objectives of this FMP; ~~or~~
 - e. The applicant has failed to demonstrate a valid justification for the permit; or
 - e.f. The activity proposed under the EFP could create a significant enforcement problem.
5. The decision of a Regional Administrator to grant or deny an EFP is the final action of NMFS. If the permit is granted, the Regional Director will publish a notice, as granted, is significantly different from the original application, or is denied, NMFS may publish notification in the Federal Register describing the experimental/exempted fishing to be conducted under the EFP or the reasons for denial.
6. The Regional ~~Director~~Administrator may attach terms and conditions to the EFP consistent with the purpose of the ~~experiment/exempted fishing~~, including, but not limited to:
 - a. The maximum amount of each regulated species ~~which that~~ can be harvested and landed

- during the term of the EFP, including trip limitations, where appropriate;-
- b. The number, size(s), ~~names~~name(s), and identification ~~numbers~~number(s) of the ~~vessels~~vessel(s) authorized to conduct fishing activities under the EFP;—
- c. The time(s) and place(s) where ~~experimental~~exempted fishing may be conducted;—
- d. The type, size, and amount of gear ~~which~~that may be used by each vessel operated under the EFP;—
- e. The condition that observers, a vessel monitoring system, or other electronic equipment be ~~allowed aboard~~carried on board vessels operated under an EFP; and any necessary conditions, such as predeployment notification requirements;
- f. Reasonable data reporting requirements; —
- g. ~~Such other~~Other conditions as may be necessary to assure compliance with the purposes of the EFP consistent with the objectives of this FMP and other applicable law; and,—
- h. ~~provisions~~Provisions for public release of data obtained under the EFP, that are consistent with NOAA confidentiality of statistics procedures. An applicant may be required to waive the right to confidentiality of information gathered while conducting exempted fishing as a condition of an EFP.

67. Failure of a permittee to comply with the terms and conditions of an EFP shall be grounds for revocation, suspension, or modification of the EFP with respect to all vessels conducting activities under that EFP. Any action taken to revoke, suspend, or modify an EFP shall be governed by ~~50 C.F.R. Part 621, Subpart D~~Federal regulations.

8.09.0 SCIENTIFIC RESEARCH

No changes to the text in this chapter.

10.0 PROCEDURE FOR REVIEWING STATE REGULATIONS

10.1 Background

There are and will continue to be state regulations affecting groundfish fisheries off the West Coast, which are in addition to federal regulations. This potential extends to waters off all three West Coast states, to all gear types, and to both the commercial and recreational fisheries. In some cases, it may be desirable to ensure consistency between state and federal regulations by implementing federal regulations that complement state regulations. In other cases, the Council may determine that federal regulations are not necessary to complement state regulations, but wish to assure a state that its regulations are consistent with the FMP insofar as they are applied to vessels registered in that state when fishing in the EEZ. ~~Amendment 4 addresses this need by establishing a~~ Section 10.2 describes the framework review process by which any state may petition the Council to initiate a review of its regulations, determine consistency with the FMP, and, ~~if national standards to ensure that the state regulations are enforceable. If appropriate, recommend the implementation of complementary federal regulations.~~

~~For example, current regulations implementing the FMP prohibit the use of setnets (gill and trammel nets) to catch groundfish in waters north of 38° N latitude. The purpose of this regulation is to prevent the incidental take of salmon. South of 38° N latitude, setnet gear is used primarily by small vessel fishermen to catch California halibut, white croaker, and rockfish. Only rockfish are included in the groundfish fishery management unit. Fishing for these species, which mainly are taken inshore, is regulated by the State of California. Thus, some of the setnet fisheries regulated by the state harvest species of groundfish which are also managed under this FMP.~~

~~When the FMP was developed and approved by the Secretary, the Council acknowledged the State of California was regulating the set net fishery off central and southern California. It was the Council's desire that state regulations regarding setnets also be applicable to vessels fishing in the EEZ to the extent that each state regulation was consistent with the goals of the FMP and the national standards of the Magnuson-Stevens Act. The Council realized that it would be difficult to apply state regulations to non-California registered vessels in the EEZ. However, this was not considered a significant problem because most vessels in the fishery were registered in the State of California and were subject to its regulations even when fishing in the EEZ. Federal regulations were not considered necessary.~~

~~For a variety of reasons, California setnet regulations have changed several times over the years. However none of these changes have been formally reviewed to determine if they remain consistent with the FMP and the national standards of the Magnuson-Stevens Act. A system is required to determine consistency of state regulations with the FMP and the national standards to ensure that the regulations continue to be enforceable against vessels fishing in the EEZ.~~

~~Amendment 4 establishes a framework process by which any state may obtain a determination that its regulations are consistent with the FMP and the national standards. As necessary, the Council may also recommend to the NMFS that duplicate or different federal regulations be implemented in the EEZ. While the Council retains the authority to recommend federal regulations be implemented in the EEZ, the preference is to continue to rely on state regulations in that area as long as they are consistent with the FMP.~~

10.2 Review Procedure

Any state may propose that the Council review a particular state regulation for the purpose of determining its

consistency with the FMP and the need for complementary federal regulations. Although this procedure is directed at the review of new regulations, review of existing regulations affecting the harvest of groundfish managed by the FMP also will utilize this process. The state making the proposal will include a summary of the regulations in question and concise arguments in support of consistency.

Upon receipt of a state's proposal, the Council may make an initial determination whether or not to proceed with the review. If the Council determines that the proposal has insufficient merit or little likelihood of being found consistent, it may terminate the process immediately and inform the petitioning state in writing of the reasons for its rejection.

If the Council determines sufficient merit exists to proceed with a determination, it will review the state's documentation or prepare an analysis considering, if relevant, the following factors:

1. how the proposal furthers or is not otherwise inconsistent with the objectives of the FMP, the Magnuson-Stevens Act, and other applicable law;
2. the likely effect on or interaction with any other regulations in force for the fisheries in the area concerned;
3. the expected impacts on the species or species group taken in the fishery sector being affected by the regulation;
4. the economic impacts of the regulation, including changes in catch, effort, revenue, fishing costs, participation, and income to different sectors being regulated as well as to sectors which might be indirectly affected; and,
5. any impacts in terms of achievement of quotas or harvest guidelines, maintaining year-round fisheries, maintaining stability in fisheries, prices to consumers, improved product quality, discards, joint venture operations, gear conflicts, enforcement, data collection, or other factors.

The Council will inform the public of the proposal and supporting analysis and invite public comments before and at the next scheduled Council meeting. At its next scheduled meeting, the Council will consider public testimony, public comment, advisory reports, and any further state comments or reports, and determine whether or not the proposal is consistent with the FMP and whether or not to recommend implementation of complementary federal regulations or to endorse state regulations as consistent with the FMP without additional federal regulations.

If the Council recommends the implementation of complementary federal regulations, it will forward its recommendation to the NMFS Regional Director for review and approval.

The NMFS Regional Director will publish the proposed regulation in the Federal Register for public comment, after which, if approved, he will publish final regulations as soon as practicable. If the Regional Director disapproves the proposed regulations, he will inform the Council in writing of the reasons for his disapproval.

12.011.0 GROUND FISH LIMITED ENTRY

No changes to the text in this chapter, except headings are renumbered.

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GUIDE TO APPENDICES

In the July 1993 version of the FMP the Appendices appeared as Chapter 11.0. Section 11.10 was added by Amendment 11 in 1998. Sections 11.1–11.9 contain descriptive material about stocks, fisheries, habitat, and other applicable laws, which under the proposed revision will become Appendix A. Prior to the currently proposed amendments, this material was moved out of a chapter format to a separate volume, causing the remaining chapters in the FMP to be renumbered. The Appendices contain descriptive information in support of the management program. This material may be updated without the need for a formal FMP amendment process. Language to this effect is added to Chapter 1 of the FMP. The appendices incorporated into the FMP by Amendment 19 are described below.

APPENDIX A: Information in Support of the Management Program

- Biological and Environmental Characteristics of the Resource
- Description of the Fishery
- Social and Economic Characteristics of the Fishery
- History of Management
- History of Research
- Weather-Related Vessel Safety
- Relationship of this FMP to Existing Laws and Policies
- Management and Enforcement Costs

APPENDIX B: Pacific Coast Groundfish Essential Fish Habitat

1. Description of the EFH Assessment model
2. Groundfish life history descriptions (McCain, et al.)
3. Habitat Use Database output of species/life stage distribution/associations
4. HSP maps for individual groundfish species/lifestages
5. Detailed specification of HAPCs (maps, coordinates, text, as appropriate)
6. Reference to website URL for HSP maps/HAPC maps/interactive map server (when available)
7. Research needs
 - o FMP Section 11.10.6 (to be revised)
 - o Risk Assessment Section 5.3, Data Gaps Analysis

APPENDIX C: The Effects of Fishing on West Coast Groundfish Essential Fish Habitat and Current Conservation Measures

1. Description of the Impacts Model
2. MRAG Americas, Inc. 2004. *The effects of fishing gears on habitat: West Coast perspective* (Draft 6). Portland: Pacific States Marine Fisheries Commission. July 28, 2004.
3. Conservation measures (i.e., detailed specification of closed areas)

APPENDIX D: Nonfishing Effects on West Coast Groundfish Essential Fish Habitat and Recommended Conservation Measures

Hanson, J., M. Helvey, and R. Strach (eds.). 2003. *Nonfishing Effects on West Coast Groundfish Essential Fish Habitat and Recommended Conservation Measures* (Version 1). National Marine Fisheries Service. August 2003.

The Pacific Fishery Management Council's Groundfish Bycatch Mitigation Program Work Plan June 2005

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1. Introduction

In September 2004 NMFS released the Bycatch Mitigation Program Final Environmental Impact Statement (FEIS), containing the Council's preferred alternative. To implement this alternative, Amendment 18 to the groundfish fishery management plan (FMP) adds language to:

- Require the use of current bycatch minimization measures.
- Fully describe the current standardized bycatch reporting methodology.
- Incorporate the Groundfish Strategic Plan goal of reducing overcapacity in all commercial fisheries.
- Authorize a sector-specific bycatch accounting methodology.
- Support the future use of individual fishing quota (IFQ) programs as bycatch reduction tools for appropriate fishery sectors.
- Authorize the use of sector-specific and vessel-specific total catch limit programs to reduce bycatch in appropriate sectors of the fishery. These programs could include monitoring standards, full retention programs, and individual vessel incentives for exemption from sector total catch limits.

The Groundfish FMP is a framework plan; it provides the Council with a range of management measures they may consider for implementation through federal rulemaking. Implementing new management measures most commonly occurs as part of the biennial harvest specifications regulatory process. The Council may also develop regulatory amendments to change or amend federal regulations.

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Section 2 of this work plan reviews the range of measures the Council has already implemented. Section 3 proposes new bycatch mitigation measures to be implemented through federal rulemaking.

2. Bycatch Mitigation Measures and Programs Currently in Place or Under Development

Ongoing management measures and programs implemented by the Council and NMFS that mitigate bycatch include:

- At-sea observer programs in both shore-delivery and sea-delivery groundfish fisheries, including groundfish limited entry trawl, limited entry fixed gear, and open access vessels.
- Large-scale closed areas to reduce protected salmon bycatch: Klamath and Columbia River Conservation Zones.
- Large-scale closed areas to reduce overfished species bycatch: Rockfish Conservation Areas, Cowcod Conservation Areas, Yelloweye Rockfish Conservation Area.
- Vessel Monitoring System (VMS) requirements for the limited entry fleet to ensure compliance with closed area restrictions.
- Season restrictions to reduce directed and incidental catch of overfished species.
- Trawl mesh size, chafing gear, and codend regulations to reduce juvenile fish bycatch.
- Trawl footrope size regulations to reduce access to rocky habitat and rockfish bycatch.
- Selective flatfish trawl regulations to reduce bycatch of rockfish in flatfish fisheries.
- Escape panel requirements for groundfish pots to prevent lost pots from ghost fishing.
- FMP Amendment 14 to reduce capacity in the limited entry fixed gear fleet.
- Trawl buyback to reduce capacity in limited entry trawl fleet.
- Overfished species total catch limits in the whiting fisheries.
- Geographically-based harvest guidelines, especially in recreational fisheries.
- Improving consistency between state and federal regulations.

Bycatch mitigation measures and programs under development by the Council and NMFS include:

- Expanding VMS coverage requirements to open access fisheries that are subject to groundfish closed area restrictions.
- Implementing an IFQ program for the limited entry trawl fishery, which could be used to reduce regulatory bycatch if allowable catch amounts were tradable.
- Implementing measures to mitigate fishing impacts to essential fish habitat (EFH), proposed in a draft EIS under Council consideration, which could also mitigate bycatch.
- Implementing a full retention and electronic monitoring program for the shore-based whiting fishery.

3. Bycatch Mitigation Measures and Programs To Be Implemented Pursuant to Amendment 18

3.1. *Bycatch Mitigation Measures Described in the Preferred Alternative*

Although the Council/NMFS have implemented numerous measures to mitigate bycatch, key elements of the preferred alternative need additional development and planning to implement. As part of developing these elements, the Council/NMFS need to explore the type of monitoring that would be required, the program infrastructure that would have to be put into place, and the cost associated with adequate monitoring. Key measures discussed in the preferred alternative and considered for implementation in this work plan are:

- A sector-specific bycatch accounting methodology.
- Sector-specific total catch limit program.
- Vessel-specific total catch limit program.
- Full retention program(s).

3.2. *Sector and Vessel-specific Total Catch Limits Implementation Issues*

Draft FMP amendment language (Section 6.5.3.2) authorizes the Council to develop sector- and vessel-specific programs with the following characteristics:

- A total catch limit is a portion of the OY for a groundfish FMU species, stock, or stock complex assigned to a defined fishery sector or an individual vessel. Total catch is defined as **landed catch plus bycatch (discard) mortality**. The Council may specify total catch limits that are transferable or nontransferable among sectors or tradable or nontradable between vessels.
- Establishing an adequate bycatch (discards) monitoring program would be a prerequisite for implementing a sector total catch limit or an individual vessel total catch limit program. Two approaches to monitoring could be used, based on practicability. First, total catch could be estimated by modeling the expected bycatch associated with the landing of a particular mix of species. With this approach there would be some lag in making estimates, depending on the frequency landing reports (e.g., quota species monitoring [QSM] reports) and the lag time between the end of the monitoring period (e.g., calendar month) and when the report is generated. The second approach could be used in cases where it is practicable to have full at-sea monitoring (as in the at-sea Pacific whiting fishery), which would allow near-real-time monitoring of total catch. The type of monitoring program would likely affect how and whether total catch limits could be implemented, because this reporting would be used to determine when a limit is reached, which would necessitate a fishery closure if it occurred before the end of the limit period (e.g., the fishing year).
- Total catch limits would function like allocated quotas for one or more sectors or vessels in a sector; once a sector or vessel has attained the catch limit, fishing ceases until the start of the next year, fishing season, or other defined period. Limits could differ from an allocation in that they need not be permanent; they could be established biennially, for example. If authorized by the Council, a limit could be changed during a limit period. For example, if total catch in one sector is projected not to reach the total catch limit established for that sector, the difference between the sector total catch limit and projected total catch by vessels in the sector could be transferred to another sector that is nearing its limit.

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- The Council will consider 10 sectors (described in draft FMP language) initially when developing sector limits, but has the flexibility to combine or subdivide these sectors for the purpose of establishing limits.
- An individual-vessel total catch limit program may be established for an already total-catch-limited sector. Vessels would then have the option to gain an exemption from the sector limit and be assigned a limit specific to the vessel. Any limit amount assigned to the vessel would be deducted from the applicable sector limit. Both monitoring requirements and incentives (e.g., higher, differential cumulative landing limits) could apply to participating vessels.
- Barring any legal constraints, vessels with their own total catch limits may be permitted to pool limit amounts and then reassign increments of the pooled limits to participating vessels. This mechanism would rely on private contracts, similar to current arrangements for assigning the overall quota to individual vessels in the Pacific whiting catcher/processor sector.

3.3. *Bycatch Mitigation Implementation Mechanisms*

As noted above, implementing bycatch mitigation measures authorized by the amended FMP will involve full rulemaking to establish regulations. Since the bycatch mitigation program EIS was programmatic, and did not evaluate the specifics of total catch limit programs, another National Environmental Policy Act (NEPA) analysis would likely be required as part of this rulemaking. Implementing total catch limits could be part of one of the following rulemaking/NEPA processes:

1. The biennial harvest specifications rulemaking process and associated EIS (or environmental assessment [EA]).
2. The planned inter-sector allocation EIS proposed as part of the trawl individual quota (TIQ) process.
3. A separate rulemaking/NEPA process.

These three procedural options are not mutually exclusive. For example, catch limits, applying to just a few species and sectors, could be implemented as an “interim” measure as part of the harvest specifications process, while permanent—and perhaps more comprehensive—allocated catch limits could be evaluated in the inter-sector allocation EIS.

Timing is a second issue to consider. Catch limit implementation would likely need to coincide with the biennial harvest specifications process, since catch limits represent a reservation of a portion of an OY specification for a given overfished species. This suggests using the 2007-2008 biennial management cycle to establish some comparatively modest interim measures. Permanent, more comprehensive limits would be implemented for the 2009-2010 cycle through the inter-sector allocation EIS. The timing of the TIQ initiative also needs to be considered. Sector and vessel-specific limits and IFQs may be viewed as a conceptual and functional continuum. The allocations and monitoring programs required for sector and vessel-specific limits are prerequisites for an IFQ program. In addition, decisions and design elements for total catch limit programs need to be consistent with parallel issues in the TIQ program. Since allocations—at least *between* the limited entry trawl sector and other sectors collectively and *among* trawl vessels—are a prerequisite for TIQ implementation, a sector/vessel-specific catch limit program affecting the trawl sector should precede or coincide with TIQ implementation. Full implementation of the TIQ program is currently scheduled for the beginning of the 2009-2010 biennial cycle.

The following implementation options are discussed below:

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- Biennial harvest specifications process: implement interim sector total catch limits for the 2007-2008 period.
- Inter-sector allocation EIS: implement permanent sector total catch limits to begin in 2009.
- Regulatory amendment: implement individual vessel total catch limits in 2011.

3.3.1. Biennial Specifications Process to Implement Interim Sector Total Catch Limits: 2007-2008

Based on the discussion above, the following sector catch limits will be evaluated as part of the 2007-2008 harvest specifications EIS and rulemaking:

Sectors	Species
• Non-whiting limited entry trawl vessels. • At-sea Pacific whiting catcher-processors. • Limited entry trawl vessels delivering to at-sea Pacific whiting motherships. • Limited entry trawl vessels delivering Pacific whiting to shore-based processing plants.	• Canary rockfish • Darkblotched rockfish • Widow rockfish
Limited entry fixed gear vessels, including separately or in combination: • Sablefish-endorsed permit holders • Permit holders without the sablefish endorsement	• Canary rockfish • Yelloweye rockfish
• Recreational subsectors as defined as part of the harvest specifications process	• Canary rockfish • Lingcod • Yelloweye rockfish

Note: Supplemental Tribal Comment from the March 2005 Council meeting states “treaty fisheries would not be an appropriate sector for total catch limits on overfished or other bycatch species.” Subject to further Council discussion, the tribal sector is not identified for the use of sector total catch limits at this time.

Similar to OYs, total catch limits would be established for each year in the two-year management period. Establishing catch limits is contingent on an accurate, sufficiently real-time catch accounting system for participating sectors. The projected status of catch accounting for the 2007-2008 period will be part of the evaluation. The risk of overages—total catch above projections—in sectors not assigned catch limits will also have to be evaluated. A policy for dealing with overages will have to be developed. Related to this, an evaluation would consider whether catch limits can be changed during the year (the limit period). The ability to change limits would anticipate inaccuracies in the catch projections upon which the limits were based, which would result in overages. On the other hand, if fishery participants thought the limit could be adjusted upward, such a policy could weaken the fishers’ incentive to adopt bycatch-reducing practices.

3.3.2. Inter-sector Allocation EIS for Permanent Sector Total Catch Limits: 2009

The current proposed action to be evaluated in the inter-sector allocation EIS is allocation of a wide range of target and non-target species between the limited entry trawl sector and all other sectors combined for the purpose of establishing ITQs for the limited entry trawl sector. The proposed action would be expanded to include permanent allocations of groundfish species—functioning as total catch limits—among sectors other than limited entry trawl. The EIS would evaluate what sectors should be defined for

the purpose of establishing catch limits and the catch accounting program necessary to support them. The NEPA and rulemaking processes would be set to a schedule to implement the proposed action at the start of the 2009-2010 management cycle.

3.3.3. Regulatory Amendment to Implement Vessel-specific Total Catch Limits: 2011

A vessel-specific total catch limit program could be developed for implementation beginning in 2011. A separate NEPA (EA or EIS) and rulemaking process would be used to evaluate elements of this program. Phasing it in this way will benefit from considerable experience with sector catch limits, settled allocations for identified sectors, and the implementation of ITQs in the limited entry trawl sector. The preferred alternative in the bycatch program FEIS envisions vessel-specific limits as a modification of current cumulative landing limit regime (“This alternative would modify the definition of trip limits to include catch [mortality] limits....”) The two components—landed catch and discard mortality—of a total catch limit would be accounted for and limited, so there would be no need to prohibit retention as a disincentive. Vessels “opting out” of a sector catch limit would be assigned their own limit for each applicable species. Requirements could be established—partial or full payment of observer costs, for example—for vessels to receive a limit. This could be coupled with an incentive, such as higher cumulative landing limits for non-overfished species.

A scheme for determining vessel-specific limits would have to be developed. In geographically diverse sectors, where participating vessels may encounter overfished species at variable rates, a proportional division of the optimum yield to establish vessel limits would not work very well. One solution would be to make the individual vessel limits tradable; this would represent a special case of an ITQ program if limits (i.e., quotas) applied only to overfished species. Current information suggests the overhead costs of an ITQ system are not justifiable if only applied to a limited range of species. Another approach would be to treat vessel limits similar to the initial allocation in an ITQ program without introducing tradability. Limits could be based on catch history during a specified “window period,” for example. Any such formula would have to ensure equitability within a sector between vessels remaining under the sector catch limit and those with vessel-specific limits.

A further elaboration of vessel-specific limits would be to allow vessels to pool limits and trade increments of the pooled limit by private contract. Alternatives based on these issues would be evaluated in the EA or EIS associated with the rulemaking process to implement vessel-specific limits. For implementation in 2011, this process would likely have to begin in mid-2009.

3.3.4. Full Retention Programs

The bycatch program FEIS mentions full retention as a sub-component of a sector/vessel-specific catch limit program but contains no details or analysis of sectors that might be subject to full retention. The shore-based Pacific whiting trawl sector has been operating under a full retention policy, using an exempted fishing permit (EFP) issued for each management period. An EA is currently being developed to transition from the EFP to a permanent regulatory framework. Although this retention requirement was established to monitor the incidental capture of listed salmon species, it allows better catch accounting through current dockside monitoring programs. Full retention can be coupled with disposition requirements for landings (such as donation to a food bank of designated species) to discourage targeting. Required retention of selected species in designated sectors could be part of a catch accounting program in support of sector and/or vessel-specific total catch limits. The Council could consider full retention requirements as part of any three of the work plan elements described above.

3.4. *Other Bycatch Mitigation Measures the Council May Consider*

Although not discussed in the bycatch mitigation program FEIS, the Council could also consider the following bycatch mitigation measures for development:

- Integrating EFH- and bycatch-related groundfish closed areas so that where EFH-related closed areas reduce bycatch, that reduction is accounted for in bycatch rate modeling.
- Expanding VMS coverage requirements to commercial passenger fishing vessels that are subject to groundfish closed area restrictions.
- Hot-spot management to either prevent fishing in an area of overfished species abundance, or to allow fishing in an area of target species abundance.

The Council has the option of adding additional mitigation measures to the work plan.

GROUND FISH ADVISORY SUBPANEL REPORT ON AMENDMENT 18 (BYCATCH)

The Groundfish Advisory Subpanel (GAP) has the following comments on language related to Amendment 18 contained in Agenda Item F.3.a, Attachment 1.

1. Page 39, Section 6. 3. 2. Sector-specific and Vessel-specific Total Catch Limit Programs. To create vessel specific limits, sectors will have to be limited first.
2. Page 45, Section 6.6.2. Recreational Fisheries. This lacks a good definition of rod and reel fishing gear.
3. Electronic systems should be developed with or in spite of essential fish habitat needs. GAP views the electronic monitoring systems as a useful tool to mitigate costs in the observer program and as an aid in the implementation of a full retention fishery.
4. The GAP agrees with the Groundfish Management Team (GMT), that budgets and existing staff responsibilities need to be considered when crafting regulatory requirements. Efforts to mitigate bycatch have to take expenses and Council work loads into account.
5. Finally, the GAP supports the Council moving forward with consideration of the trawl individual quota program which would provide for 100% validation of catch, and provide excellent bycatch mitigation.
6. The GAP fully agrees with the GMT report with respect to section 6.4.1.1, and so would like the Council to carefully consider this section in their deliberations.

PFGC
09/21/05

AMENDMENT 18 (BYCATCH)

At their August meeting, the Groundfish Management Team (GMT) received a presentation on the work plan and draft management measures to implement Amendment 18 (Bycatch Mitigation Program) from Dr. Kit Dahl of the Council staff and Ms. Yvonne deReynier of National Marine Fisheries Service (NMFS). The GMT applauds the work that has been undertaken with regard to this task and continues to offer its support in moving forward with accounting for bycatch and reducing it wherever practicable.

The Council has developed a number of sophisticated fishery management tools, such as the trawl bycatch model, the bycatch scorecard, and most recently bycatch limits. To move to the use of more even sophisticated management tools will require more sophisticated monitoring tools. The precision of current groundfish catch monitoring tools is only adequate for the real-time monitoring and reporting of the at-sea whiting sectors. Consequently, using management tools that rely on real-time reporting, as provided in Amendment 18, may further compromise our ability to monitor total catches and to model behavior resulting from regulatory changes. Given the current groundfish monitoring program's accuracy and timeliness, management tools that rely on real-time data reports are not feasible without a significant augmentation of data programs. In short, the GMT believes the precision goals of our management have moved beyond our monitoring capabilities.

Amendatory Language:

The GMT offers the following comments on the draft amendatory language:

Section 6.4.1.1 Monitoring Total Catch At Sea - Observer and Electronic Monitoring Programs:

The document appears to posit the use of electronic monitoring (EM) programs as a feasible alternative to human observer programs. EM has been applied for a variety of fishery information needs including: fishing time and location; gear deployment and retrieval methods; catch and by-catch handling; and effort monitoring. One of the goals of the 2004 and 2005 shore-based whiting exempted fishing permit (EFP) is to determine the utility of EM in verifying retention and quantifying discard. Data from these projects suggest that EM is useful for documenting the occurrence of retention and discard, but whether or not EM can be used to quantify retention and discard is still being evaluated. Data from the whiting EFP suggests that it is unlikely, at least for trawl fisheries, that EM could provide the type of species composition information required for most of the management alternatives being considered in the draft amendment. EM technology may be an option for collecting species composition information for longline fisheries, provided the technology is made cost effective. It would be informative to have specific uses and limitations of EM more clearly articulated in the document. Identifying where an observer program would be necessary to supply the level of detail required for different management options as early as possible would help channel our limited management resources. Therefore, the GMT also recommends revising Section 6.4.1.1 to remove the sentence that reads, "An observer program will be considered only for circumstances where other data collection methods are deemed insufficient for management of the fishery."

The GMT identified that Sector-specific and Vessel-specific Total Catch Limit Programs (Section 6.5.3.2) are measures that would require detailed total catch information that are

possible only through observer programs. Landings information alone (fish tickets) is not sufficient to monitor either sector-specific or vessel-specific total catch limits. For example, the GMT has concerns about the ability to manage the whiting sector bycatch limit when catch information for the shore-based sector is based solely on a paper-based fish ticketing system. The GMT is concerned about the inadequacy of a paper-based fish ticketing system to provide timely and precise catch information, but notes that neither the States nor NMFS have adequate funding to implement a coastwide electronic fish ticketing system. Further, the GMT believes that the level of resolution of total catch provided by current monitoring efforts, including the West Coast Groundfish Observer Program (WCGOP) is probably insufficient to monitor and respond inseason to sector specific limits for some species and/or sectors. Based on the experience of other fisheries management programs around the world, vessel-specific total catch limits would likely require full observer coverage and real time communication from the vessel and a larger shore-based staff to process and quality control the data. The observer coverage in the at-sea whiting fishery is an example of observer coverage that the GMT believes is adequate to monitor sector-specific and/or vessel-specific total catch limits. The GMT discussed at some length whether using observers to monitor compliance with either sector, or with vessel-specific total catch limits, is even possible within the provisions of the Magnuson-Stevens Fishery Conservation and Management Act, the Groundfish Fishery Management Plan, or the structure of the WCGOP. This issue has previously arisen during Council deliberations on EFP programs. The GMT believes that catch monitoring through observer programs will be a necessary and integral part not only of total catch limit programs, but also of limited access measures such as the Trawl Individual Quota (TIQ) program currently under development. If there are legal impediments to this type of observer monitoring, then that issue should be elevated and addressed in the development of both programs. The GMT recommends that the FMP be revised via Amendment 18 to explicitly allow the use of observers for real-time catch monitoring programs.

Given the above issues, the GMT recommends that the Amendment 18 amendatory language that goes out for public review following this Council meeting be revised so that the second through fourth paragraphs of Section 6.4.1.1 reads as follows (revisions to current draft language shown in underline/strikeout):

All fishing vessels operating in this management unit, which includes catcher/processors, at-sea processors and those vessels that directly or incidentally harvest groundfish in the waters off Washington, Oregon, and California ~~area and land in another area~~, may be required to accommodate an observer or electronic-monitoring system for the purpose of collecting scientific data or verifying catch landings and discard estimates used for scientific data collection. These vessels may also be required to accommodate an observer or electronic-monitoring system for the purpose of estimating total catch inseason to implement a sector- or vessel-specific total catch limit program. ~~An observer program will be considered only for circumstances where other data collection methods are deemed insufficient for management of the fishery.~~ Implementation of any observer ~~program~~ or electronic monitoring program will be in accordance with appropriate federal procedures . . .

The Regional Administrator will implement an observer program through a Council-approved federal regulatory framework. Details of how observer coverage will be distributed across the West Coast groundfish fleets will be described in an observer coverage plan that is appropriate to the purpose of the particular observer program goals.

An observer coverage plan designed for a scientific data collection program will likely be different from an observer coverage plan designed for a sector- or vessel-specific total catch monitoring program. NMFS will publish . . .

Electronic monitoring is an automated alternative to some human data collection systems. Electronic monitoring equipment may ~~can~~ provide accurate, timely, and verifiable information on some elements of fishing operations ~~fisheries data~~ at a lower cost than that provided by an at-sea observer. Electronic monitoring is an integrated assortment . . .

Implementation Workplan:

The GMT offers the following comments on the draft workplan:

The workplan detailing the implementation of Amendment 18 specifies interim sector total catch limits that will be evaluated as part of the 2007-2008 harvest specifications EIS and rulemaking. The GMT supports the implementation of this program; however, the GMT believes that the current monitoring programs are not sufficient to monitor harvest against sector total catch limits, and it is our understanding that the necessary enhancements to these monitoring programs will likely be costly and will not be in place in 2007-2008. Further, the identification and analyses of management measures for the 2007-2008 specifications process begins in November 2005, and the GMT is not prepared to develop sector total catch limits over the next six weeks. Issues such as intersector allocations, allocation responsiveness to new stock assessment results, and overage accounting require policy guidance from the Council in advance of the GMT's October meeting. Other issues, such as accurate and timely monitoring of groundfish catches in the different sectors, will require a significant revamping and upgrading of current monitoring programs. It is the recommendation of the GMT that sector total catch limits be implemented following the approval of the Intersector-Allocation EIS and development of appropriate monitoring programs. For the interim, however, a total catch limit program applied to a sub-sector, such as a target-strategy subsector, could serve as a pilot program in 2007-2008, to evaluate the capabilities and constraints in our current program structure in preparation for eventual broader implementation. Pending available resources, this could be built onto the existing shoreside whiting EFP already under consideration for observer and electronic monitoring comparison. Another option might be use of new electronic monitoring technology, such as that used in Alaska, in a subsector of the longline fishery, particularly if coupled with industry incentives such as access to otherwise closed areas.

GMT recommendations:

1. Adopt for public review the proposed Amendment 18 language with GMT revisions to Section 6.4.1.1.
2. Modify workplan to reflect GMT concerns over Amendment 18 implementation and adopt for public review.
3. Identify sub-sectors that may be used for a pilot program in 2007-2008.

PPMC

09/21/05

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AMENDMENT 18 (BYCATCH)

The National Marine Fisheries Service (NMFS) published the Pacific Coast Groundfish Fishery Management Plan Bycatch Mitigation Program Final Environmental Impact Statement (Bycatch Mitigation Program FEIS) in September 2004, containing the Council's preferred alternative for this action. At their November 2004 meeting, the Council reviewed the substance of the preferred alternative and directed Council and NMFS staff to prepare preliminary drafts of (1) amendatory language to implement the bycatch program (Amendment 18) and (2) a work plan for implementing the management measures described in the preferred alternative.

As discussed at the November 2004 meeting, in addition to incorporating material related to the Bycatch Mitigation Program FEIS into the fishery management plan (FMP), the FMP would be updated to better reflect the current management framework. At the March 2005 meeting the Council reviewed a preliminary draft of the amendatory language and preliminary draft work plan and provided guidance to staff for further revision. In addition to incorporating the bycatch mitigation measures described in the preferred alternative, the FMP has been reorganized and updated. In particular, Chapter 6 (Management Measures) is substantially reorganized with material from Chapter 9 (Restrictions on other Fisheries) and Chapter 11 (Management Measures That Continue In Effect with Implementation of Amendment 4) incorporated into it. Section 6.6 (Essential Fish Habitat) is split off into a new chapter (Chapter 7).

Currently Amendment 18, addressing bycatch, and Amendment 19, addressing essential fish habitat (EFH), are on the same timeline. Because of this and the fact that there is substantial overlap between the parts of the FMP these two amendments address, a combined document, incorporating both Amendment 18 and Amendment 19 changes, is provided.

Attachment 1 is the draft amendatory language; pages ii through vii contain detailed information explaining and guiding the reader through the proposed changes. Key sections addressing bycatch mitigation measures from the bycatch FEIS include:

- Section 2.1, Goals and Objectives for Managing the Pacific Coast Groundfish Fishery: modification of Goal 3 and Objectives 8, 9, and 12.
- Section 2.2, Operational Definition of Terms: definition of a total catch limit.
- Section 6.4, Standardized Total Catch Reporting and Compliance Monitoring Program.
- Section 6.5, Bycatch Mitigation Program.

Other sections of Chapter 6, describing procedures for establishing and adjusting management measures (Section 6.2) and the range of measures available to the Council (Section 6.6–6.9), have broad applicability and thus may also apply to bycatch mitigation.

Attachment 2 is the draft work plan, incorporating recommendations made by the Council at the March 2005 meeting. Subject to any further recommendations, this document will help the Council plan future bycatch mitigation activities and inform the public about the Council's intentions.

At this meeting, the Council should recommend desired changes to the draft amendment language and approve the draft for public review. The revised amendment language would be brought back before the Council in November 2005 for final action. Then, subject to Council approval, it will be submitted to NMFS for review and Secretarial approval, with a final response expected by early 2006. (The Bycatch Mitigation Program FEIS satisfies National Environmental Policy Act requirements for this action.)

The Council should also consider a similar process for the draft work plan (Attachment 2). At this meeting the Council would recommend changes to the draft and then approve it for public review. Then, at the November meeting, the Council would finalize any guidance with respect to those elements of the work plan applicable to the 2007-2008 groundfish harvest specifications and management measures and, as necessary, task its advisory committees (particularly the Groundfish Allocation Committee) to further develop specific elements necessary for implementation.

Council Action:

Adopt Fishery Management Plan (FMP) Text and Regulatory Recommendations for Public Review.

Reference Materials:

1. Agenda Item F.3.a, Attachment 1: Draft Amendment 18 (Bycatch Mitigation Program) and Amendment 19 (Essential Fish Habitat) to the Pacific Coast Groundfish Fishery Management Plan.
2. Agenda Item F.3.a, Attachment 2: Draft Groundfish Bycatch Mitigation Work Plan.

Agenda Order:

- a. Agenda Item Overview
 - b. Reports and Comments of Advisory Bodies
 - c. Public Comment
 - d. **Council Action:** Adopt FMP Text and Regulatory Recommendations for Public Review
- Kit Dahl

PFMC
08/31/05

**Index of the Elements of the Council's Preferred Alternative
for the EFH FEIS and Corresponding FMP Amendment Language**

Element of Preferred Alternative	Location in FMP Amendment
Identify and Describe EFH	7.2
HAPCs	7.3
Estuaries	7.3.1.1
Canopy kelp	7.3.1.2
Seagrass	7.3.1.3
Rocky reefs	7.3.1.4
Areas of interest	7.3.1.5
Oil production platforms	7.3.1.6
Process for modifying existing or designating new HAPCs	7.3.2
Minimize Adverse Impacts to EFH	7.4
Prohibit expansion of bottom trawl fishing	6.8.6
Gear restrictions to protect habitat	6.6.1
Close ecologically important areas to specified gear types	6.8.5
Scottish seine exemption	6.6.1.3
Effort reduction	6.9.4
Review of mitigation efforts	6.2.4 (7.3.2)
Research and Monitoring	7.7

PROPOSED APPENDICES TO THE GROUNDFISH FMP (Drafts available on CD-ROM)

In the July 1993 version of the FMP the Appendices appeared as Chapter 11.0. Section 11.10 was added by Amendment 11 in 1998. Sections 11.1–11.9 contain descriptive material about stocks, fisheries, habitat, and other applicable laws, which under the proposed revision will become Appendix A. Prior to the currently proposed amendments, this material was moved out of a chapter format to a separate volume, causing the remaining chapters in the FMP to be renumbered. The Appendices contain descriptive information in support of the management program. This material may be updated without the need for a formal FMP amendment process. Language to this effect is added to Chapter 1 of the FMP. The appendices incorporated into the FMP by Amendment 19 are described below.

Note: The items in color underline are available in draft form on CD-ROM.

APPENDIX A: Information in Support of the Management Program

- Biological and Environmental Characteristics of the Resource
- Description of the Fishery
- Social and Economic Characteristics of the Fishery
- History of Management
- History of Research
- Weather-Related Vessel Safety
- Relationship of this FMP to Existing Laws and Policies
- Management and Enforcement Costs

APPENDIX B: Pacific Coast Groundfish Essential Fish Habitat

1. [Description of the EFH Assessment Model](#)
2. [Groundfish life history descriptions \(McCain, et al.\)](#)
3. [Habitat Use Database output of species/life stage distribution/associations](#)
4. HSP maps for individual groundfish species/lifestages
5. Detailed specification of HAPCs (maps, coordinates, text, as appropriate)
6. Reference to website URL for HSP maps/HAPC maps/interactive map server (when available)
7. [Research needs](#)
 - o FMP Section 11.10.6 (to be revised)
 - o Risk Assessment Section 5.3, Data Gaps Analysis

APPENDIX C: The Effects of Fishing on West Coast Groundfish Essential Fish Habitat and Current Conservation Measures

1. [Description of the Impacts Model](#)
2. [MRAG Americas, Inc. 2004. *The effects of fishing gears on habitat: West Coast perspective* \(Draft 6\). Portland: Pacific States Marine Fisheries Commission. July 28, 2004.](#)
3. Conservation measures (i.e., detailed specification of closed areas)

APPENDIX D: Nonfishing Effects on West Coast Groundfish Essential Fish Habitat and Recommended Conservation Measures

Hanson, J., M. Helvey, and R. Strach (eds.). 2003. *Nonfishing Effects on West Coast Groundfish Essential Fish Habitat and Recommended Conservation Measures* (Version 1). National Marine Fisheries Service. August 2003.

[Preamble]

For the reasons set out in the preamble, 50 CFR part 660 is proposed to be amended as follows:

PART 660--FISHERIES OFF WEST COAST STATES AND IN THE WESTERN PACIFIC

1. The authority citation for part 660 continues to read as follows:

Authority: 16 U.S.C. 1801 et seq.

2. In § 660.301, the purpose and scope, subpart (a) is modified as follows:

(a) This subpart implements the Pacific Coast Groundfish Fishery Management Plan (PCGFMP) developed by the Pacific Fishery Management Council. This subpart governs fishing vessels of the U.S. in the EEZ off the coasts of Washington, Oregon, and California. All weights are in round weight or round-weight equivalents, unless specified otherwise.

3. In § 660.302, a definition for “essential fish habitat or EFH” is added, the definition for “fishing gear” is renamed as “fishing gear, legal” and revised, and a definition for “fishing gear, prohibited” is added to read as follows:

§ 660.302 Definitions.

* * * * *

Essential Fish Habitat (EFH). (See §600.10) .

* * * * *

Fishing Gear, Legal includes the following types of gear and equipment used in the groundfish fishery:

(1) Bottom Contact Gear. Fishing gear designed or modified to make contact with the bottom. It includes beam trawl, bottom trawl, dredge, fixed gear, set net, demersal seine, dinglebar gear, and any other gear designed or modified to make contact with the bottom. Mechanized harvest of bottom dwelling organisms and fishing by hand (via diving) is also considered bottom contact gear for purposes of regulation if contact with the bottom occurs as a routine part of such activities.

(2) Bobbin trawl. The same as a roller trawl, a type of bottom trawl.

(3) Bottom trawl. A trawl in which the otter boards or the footrope of the net are in contact with the seabed. It includes roller (or bobbin) trawls, Danish and Scottish seine gear, and pair trawls fished on the bottom. Any trawl not meeting the requirements for a midwater trawl in §660.322 is a bottom trawl.

(4) Breastline. A rope or cable that connects the end of the headrope and the end of the trawl fishing line along the edge of the trawl web closest to the towing point.

(5) Chafing gear. Webbing or other material attached to the codend of a trawl net to protect the codend from wear.

(6) Codend. (See §600.10).

(7) Commercial vertical hook-and-line. Commercial fishing with hook-and-line gear that involves a single line anchored at the bottom and buoyed at the surface so as to fish vertically.

(8) Demersal seine. A net designed to encircle fish on the seabed. The Demersal seine is characterized by a lead line without bobbins or rollers and is fished without the use of otter boards (trawl doors). Scottish and Danish Seines are demersal

seines.

(9) Dinglebar Gear. One or more lines retrieved and set with a troll gurdy or hand troll gurdy, with a terminally attached weight from which one or more leaders with one or more lures or baited hooks are pulled through the water while a vessel is making way.

(10) Double-bar mesh. Two lengths of twine tied into a single knot.

(11) Double-walled codend. A codend constructed of two walls of webbing.

(12) Fixed gear (anchored nontrawl gear). Longline, trap or pot, set net, and stationary hook-and-line (including commercial vertical hook-and-line) gears.

(13) Gillnet. (See §600.10).

(14) Headrope. A rope or wire attached to the trawl webbing forming the leading edge of the top panel of the trawl net.

(15) Hook-and-line. One or more hooks attached to one or more lines. It may be stationary (commercial vertical hook-and-line) or mobile (troll).

(16) Longline. A stationary, buoyed, and anchored groundline with hooks attached, so as to fish along the seabed. It does not include commercial vertical hook-and-line or troll gear.

(17) Mesh size. The opening between opposing knots. Minimum mesh size means the smallest distance allowed between the inside of one knot to the inside of the opposing knot, regardless of twine size.

(18) Midwater (pelagic or off-bottom) trawl. A trawl in which the otter boards and footrope of the net remain above the seabed. It includes pair trawls if fished in midwater. A midwater trawl has no rollers or bobbins on the net. Trawl gear which otherwise qualifies as a midwater trawl but is intentionally operated to be in contact with the seabed is not considered to be a midwater trawl for purposes of regulation.

(19) Non-groundfish trawl gear. Any trawl gear other than bottom or midwater trawl gear authorized for use in the limited entry groundfish trawl fishery. Non-groundfish trawl gear generally includes trawl gear used to target pink shrimp, ridgeback prawns, California halibut and sea cucumber.

(20) Nontrawl gear. All legal commercial groundfish gear other than trawl gear.

(21) Pot. A trap.

(22) Roller trawl (bobbin trawl). A trawl with footropes equipped with rollers or bobbins made of wood, steel, rubber, plastic, or other hard material that keep the footrope above the seabed, thereby protecting the net. A roller trawl is a type of bottom trawl.

(23) Scottish Seine. A demersal seine using long lengths of rope designed to encircle fish on the seabed. The Scottish seine is characterized by long lengths of light stiff rope with a lead core to provide slight negative buoyancy. No steel cables or otter boards (trawl doors) are used.

(24) Set net. A stationary, buoyed, and anchored gillnet or trammel net.

(25) Single-walled codend. A codend constructed of a single wall of webbing knitted with single or double-bar mesh.

(26) Spear. A sharp, pointed, or barbed instrument on a shaft.

(27) Trammel net. A gillnet made with two or more walls joined to a common float line.

(28) Trap (or pot). A portable, enclosed device with one or more gates or entrances and one or more lines attached to surface floats.

(29) Trawl fishing line. A length of chain or wire rope in the bottom front end of a trawl net to which the webbing or lead ropes are attached.

(30) Trawl riblines. Heavy rope or line that runs down the sides, top, or underside of a trawl net from the mouth of the net to the terminal end of the codend to strengthen the net during fishing.

(31) Troll Gear. A lure or jig towed by fishing line behind a vessel. Troll gear is used in commercial and recreational fisheries.

* * * * *

Fishing gear, prohibited includes the following types of gear and equipment prohibited for use in the groundfish fishery, as well as any gear not explicitly authorized for use in federal waters under § 600.725:

(1) Beam Trawl Gear. A type of trawl gear in which a beam is used to hold the trawl open during fishing. Otter boards or doors are not used.

(2) Dredge Gear. A gear consisting of a mouth frame attached to a holding bag constructed of metal rings or mesh.

4. In § 660.306, paragraphs (a) (13) and (a) (14), and (h) (4) through (h) (9) are added to read as follows:

§ 660.306 Prohibitions.

In addition to the general prohibitions specified in § 600.725 of this chapter, it is unlawful for any person to:

(a) * * *

(13) Fish with dredge gear, as defined in § 660.302.

(14) Fish with beam trawl gear, as defined in § 660.302.

* * * * *

(h) * * *

(4) Fish using bottom trawl gear (defined in § 660.302) in all

waters within the EEZ seaward of a line approximating the 700 fathom (1280 m) depth contour as defined in § 660.395.

(5) Fish using bottom trawl with a footrope greater than 19 inches (48 cm) in diameter (including rollers, bobbins or other material encircling or tied along the length of the footrope) anywhere within the EEZ.

(6) Fish using bottom trawl (defined in § 660.302) with a footrope greater than 8 inches (20 cm) in diameter (including rollers, bobbins or other material encircling or tied along the length of the footrope) anywhere within EEZ shoreward of a line approximating the 100 fathom (183 m) depth contour (defined in § 660.397) .

(7) Fish with bottom trawl gear (as defined in § 660.302), within the following areas (defined in §§ 660.395 through 660.396): Olympic 2, Biogenic 1, Biogenic 2, Grays Canyon, Biogenic 3, Nahelem Bank / Shale Pile, Astoria Canyon, Siletz Deepwater, Daisy Bank / Nelson Island, Newport Rockpile / Stonewall Bank, Heceta Bank, Deepwater off Coos Bay, Bandon High Spot, Rogue Canyon.

(8) Fish with bottom trawl gear (as defined in § 660.302), other than Scottish seine within the following areas (defined in §§ 660.395 through 660.396): Eel River Canyon, Blunts Reef, Mendocino Ridge, Delgada Canyon, Tolo Bank, Point Arena Offshore, Cordell Bank, Biogenic Area 12, Farallon Islands / Fanny Shoal, Half Moon Bay, Monterey Bay / Canyon, Point Sur Deep, TNC/ED Area 2, TNC/ED Area 1, TNC/ED Area 3, Potato Bank (within Cowcod Conservation Area West), Cherry Bank (within Cowcod Conservation Area West) Hidden Reef / Kidney Bank (within Cowcod Conservation Area West), Catalina Island and Cowcod Conservation Area East.

(9) Fish with bottom contact gear (as defined in § 660.302) within the following

areas (defined in § 660.396): Thompson Seamount, President Jackson Seamount, Cordell Bank (within 50 fm (91 m) isobath).

(10) Fish with bottom contact gear (as defined in § 660.302) or any gear that is otherwise deployed deeper than 500 fathoms within the Davidson Seamount area (defined in § 660.396).

(11) Fish within the following areas (defined in § 660.396): Anacapa Island SMR, Carrington Point, Footprint, Gull Island, Harris Point, Judith Rock, Painted Cove, Richardson Rock, Santa Barbara, Scorpion, Skunk Point, and South Point.

(12) Fish within the following area, except for recreational fishing with hook and line gear: Anacapa Island SMCA (defined in §§ 660.396). Hook and line gear used in this area may not be augmented with any weights except those that are less than 6 oz. 5. In § 660.381, paragraphs (b)(4) and (b)(5) are revised and (b)(7), (d)(5), (d)(6), (e) are added to read as follows:

§ 660.381 Limited entry trawl fishery management measures.

(b) * * *

(4) Large footrope trawl gear. Large footrope gear is bottom trawl gear with a footrope diameter larger than 8 inches (20 cm) (including rollers, bobbins or other material encircling or tied along the length of the footrope). It is unlawful to fish using bottom trawl with a footrope greater than 8 inches (20 cm) anywhere within the EEZ shoreward of a line approximating the 100 fathom (183 m) depth contour (defined in § 660.397). It is unlawful to use bottom trawl with a footrope greater than 19 inches (48 cm) in diameter

anywhere within the EEZ.

(5) Small footrope trawl gear. Small footrope gear is bottom trawl gear with a footrope diameter of 8 inches (20 cm) or smaller (including rollers, bobbins or other material encircling or tied along the length of the footrope). Chafing gear may be used only on the last 50 meshes of a small footrope trawl, measured from the terminal (closed) end of the codend. Other lines or ropes that run parallel to the footrope may not be augmented such that they have a diameter larger than 8 inches (20 cm). For enforcement purposes, the footrope will be measured in a straight line from the outside edge to the opposite outside edge at the widest part on any individual part, including any individual disk, roller, bobbin, or any other device. It is unlawful to fish using bottom trawl with a footrope greater than 8 inches (20 cm) in all waters within the EEZ shoreward of a line approximating the 100 fathom (183 m) depth contour (defined in § 660.397).

(i) Selective flatfish trawl gear is a type of small footrope trawl gear. The selective flatfish trawl net must be a two-seamed net and its breastline may not be longer than 3 ft (0.92 m) in length.

There may be no floats along the center third of the selective flatfish trawl net's headrope and the headrope must be at least 30 percent longer in length than the footrope. Selective flatfish trawl gear may not have a footrope that is longer than 105 ft (32.26 m) in length. An explanatory diagram of a selective flatfish trawl net is provided as Figure 1 of Part 660, Subpart G.

(ii) [Reserved]

(7) It is unlawful to fish with beam trawl gear, as defined in § 660.302.

* * * * *

(d) * * *

(5) It is unlawful to fish using bottom trawl gear (defined in § 660.302) gear in all waters within the EEZ seaward of a line approximating the 700 fathom (1280 m) depth contour (defined in § 660.395).

(6) It is unlawful to fish with bottom trawl gear (as defined in § 660.302), within the following areas (defined in §§ 660.395 through 660.396): Olympic 2, Biogenic 1, Biogenic 2, Grays Canyon, Biogenic 3, Nahelem Bank / Shale Pile, Astoria Canyon, Siletz Deepwater, Daisy Bank / Nelson Island, Newport Rockpile / Stonewall Bank, Heceta Bank, Deepwater off Coos Bay, Bandon High Spot, Rogue Canyon.

(7) Fish with bottom trawl gear (as defined in § 660.302), other than Scottish seine within the following areas (defined in §§ 660.395 through 660.396): Eel River Canyon, Blunts Reef, Mendocino Ridge, Delgada Canyon, Tolo Bank, Point Arena Offshore, Cordell Bank, Biogenic Area 12, Farallon Islands / Fanny Shoal, Half Moon Bay, Monterey Bay / Canyon, Point Sur Deep, TNC/ED Area 2, TNC/ED Area 1, TNC/ED Area 3, Potato Bank (within Cowcod Conservation Area West), Cherry Bank (within Cowcod Conservation Area West) Hidden Reef / Kidney Bank (within Cowcod Conservation Area West), Catalina Island and Cowcod Conservation Area East.

* * * * *

6. In § 660.370, paragraph (h)(9) is added to read as follows:

§ 660.370 Specifications and Management Measures.

(h) * * *

(9) Essential Fish Habitat (EFH). In addition to the gear and area specific management measures intended to protect EFH in § 660.380 - § 660.397, the following measures apply to all vessels operating anywhere within the EEZ:

(1) It is unlawful to fish with bottom contact gear (as defined in § 660.302) within the following areas (defined in § 660.396): Thompson Seamount, President Jackson Seamount, Cordell Bank (within 50 fm (91 m) isobath).

(2) It is unlawful to fish with bottom contact gear (as defined in § 660.302) or any gear that is otherwise deployed deeper than 500 fathoms within the Davidson Seamount area (defined in § 660.396).

(3) It is unlawful to fish within the following areas (defined in § 660.396): Anacapa Island SMR, Carrington Point, Footprint, Gull Island, Harris Point, Judith Rock, Painted Cove, Richardson Rock, Santa Barbara, Scorpion, Skunk Point, and South Point.

(3) Fish within the following area, except for recreational fishing with hook and line gear: Anacapa Island SMCA (defined in §§ 660.396). Hook and line gear used in this area may not be augmented with any weights except those that are less than 6 oz.

7. In § 660.385, the introductory text is revised to read as follows:

§ 660.385 Washington coastal tribal fisheries management measures. In 1994, the United States formally recognized that the four Washington coastal treaty Indian tribes (Makah, Quileute, Hoh, and Quinault) have treaty rights to fish for groundfish in the Pacific Ocean, and concluded that, in general terms, the quantification of those

rights is 50 percent of the harvestable surplus of groundfish that pass through the tribes usual and accustomed fishing areas (described at 50 CFR 660.324). Measures implemented to minimize adverse impacts to groundfish EFH, as described in §§ 660.306 and 660.381 do not apply to tribal fisheries in their usual and accustomed fishing areas. Tribal fishery allocations for sablefish and whiting, are provided in paragraphs (a) and (e) of this section, respectively, and the tribal harvest guideline for black rockfish is provided in paragraph (b)(1) of this section. Trip limits for certain species were recommended by the tribes and the Council for 2005-2006 and are specified here with the tribal allocations.

8. § 660.395 is added to read as follows:

§ 660.395 Groundfish Essential Fish Habitat (EFH) Conservation Areas. In § 660.302, essential fish habitat (EFH) is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity." The areas in this subsection are designated to "minimize adverse impacts to EFH to the extent practicable." Straight lines connecting a series of Latitude/longitude coordinates demarcate the boundaries for areas designated as Groundfish EFH Conservation Areas. Coordinates outlining the boundaries of Groundfish EFH Conservation Areas are provided in §§ 660.395 through 660.396. Fishing activity that is prohibited or permitted within a particular area designated as a groundfish EFH Conservation Area is detailed at § 660.306 and § 660.381.

(a) Seaward of the 700 fathom contour. This area includes all

waters within the West Coast EEZ west of a line approximating the 700 fathom (1280 m) depth contour and is defined by straight lines connecting all of the following points in the order stated:

- (1) 48°07.52' N. lat., 126°01.50' W. long.;
- (2) 48°01.42' N. lat., 125°58.20' W. long.;
- (3) 47°58.49' N. lat., 125°48.37' W. long.;
- (4) 47°47.21' N. lat., 125°43.73' W. long.;
- (5) 47°30.01' N. lat., 125°30.06' W. long.;
- (6) 47°29.97' N. lat., 125°21.05' W. long.;
- (7) 47°28.54' N. lat., 125°18.82' W. long.;
- (8) 47°08.82' N. lat., 125°10.01' W. long.;
- (9) 47°04.69' N. lat., 125°03.77' W. long.;
- (10) 46°49.48' N. lat., 125°17.38' W. long.;
- (11) 46°40.00' N. lat., 125°10.00' W. long.;
- (12) 46°28.64' N. lat., 124°52.91' W. long.;
- (13) 46°14.13' N. lat., 125°02.72' W. long.;
- (14) 46°05.10' N. lat., 124°56.88' W. long.;
- (15) 46°01.92' N. lat., 125°02.46' W. long.;
- (16) 45°53.19' N. lat., 124°58.57' W. long.;
- (17) 45°48.72' N. lat., 124°56.58' W. long.;
- (18) 45°47.70' N. lat., 124°52.20' W. long.;
- (19) 45°40.86' N. lat., 124°55.62' W. long.;

- (20) 45°36.50' N. lat., 124°51.91' W. long.;
- (21) 45°29.82' N. lat., 124°54.30' W. long.;
- (22) 44°55.69' N. lat., 125°08.35' W. long.;
- (23) 44°49.93' N. lat., 125°01.51' W. long.;
- (24) 44°46.93' N. lat., 125°02.83' W. long.;
- (25) 44°41.96' N. lat., 125°10.64' W. long.;
- (26) 44°36.44' N. lat., 125°10.27' W. long.;
- (27) 44°27.46' N. lat., 125°11.48' W. long.;
- (28) 44°23.59' N. lat., 125°09.95' W. long.;
- (29) 43°58.37' N. lat., 125°02.93' W. long.;
- (30) 43°54.59' N. lat., 125°05.92' W. long.;
- (31) 43°39.15' N. lat., 125°05.61' W. long.;
- (32) 43°36.58' N. lat., 125°06.56' W. long.;
- (33) 43°33.04' N. lat., 125°08.41' W. long.;
- (34) 43°15.95' N. lat., 125°07.84' W. long.;
- (35) 42°47.50' N. lat., 124°59.96' W. long.;
- (36) 42°35.01' N. lat., 125°00.68' W. long.;
- (37) 42°34.11' N. lat., 124°55.62' W. long.;
- (38) 42°23.81' N. lat., 124°52.85' W. long.;
- (39) 42°18.36' N. lat., 124°59.09' W. long.;
- (40) 42°05.89' N. lat., 124°58.77' W. long.;
- (41) 42°02.54' N. lat., 125°05.44' W. long.;

- (42) 41°32.33' N. lat., 125°01.21' W. long.;
- (43) 41°14.52' N. lat., 124°52.67' W. long.;
- (44) 40°40.57' N. lat., 124°44.92' W. long.;
- (45) 40°36.24' N. lat., 124°42.01' W. long.;
- (46) 40°34.63' N. lat., 124°45.56' W. long.;
- (47) 40°23.81' N. lat., 124°41.16' W. long.;
- (48) 40°20.54' N. lat., 124°36.36' W. long.;
- (49) 40°21.65' N. lat., 124°57.00' W. long.;
- (50) 40°18.54' N. lat., 125°09.47' W. long.;
- (51) 40°14.54' N. lat., 125°09.83' W. long.;
- (52) 40°11.79' N. lat., 125°07.39' W. long.;
- (53) 40°06.72' N. lat., 125°04.28' W. long.;
- (54) 39°52.31' N. lat., 124°41.00' W. long.;
- (55) 39°55.99' N. lat., 124°25.88' W. long.;
- (56) 39°44.07' N. lat., 124°13.59' W. long.;
- (57) 39°35.82' N. lat., 124°12.02' W. long.;
- (58) 39°24.54' N. lat., 124°16.01' W. long.;
- (59) 39°01.97' N. lat., 124°11.20' W. long.;
- (60) 38°33.48' N. lat., 123°48.21' W. long.;
- (61) 38°14.49' N. lat., 123°38.89' W. long.;
- (62) 37°56.97' N. lat., 123°31.65' W. long.;
- (63) 37°49.09' N. lat., 123°27.98' W. long.;

- (64) 37°40.29' N. lat., 123°12.83' W. long.;
- (65) 37°22.54' N. lat., 123°14.65' W. long.;
- (66) 37°08.42' N. lat., 123°06.89' W. long.;
- (67) 37°05.98' N. lat., 123°05.31' W. long.;
- (68) 37°02.91' N. lat., 122°58.61' W. long.;
- (69) 36°59.02' N. lat., 122°50.92' W. long.;
- (70) 36°55.08' N. lat., 122°36.46' W. long.;
- (71) 36°50.32' N. lat., 122°17.44' W. long.;
- (72) 36°44.54' N. lat., 122°19.42' W. long.;
- (73) 36°40.76' N. lat., 122°17.28' W. long.;
- (74) 36°39.88' N. lat., 122°09.69' W. long.;
- (75) 36°44.52' N. lat., 122°07.13' W. long.;
- (76) 36°42.26' N. lat., 122°03.54' W. long.;
- (77) 36°30.02' N. lat., 122°09.85' W. long.;
- (78) 36°22.33' N. lat., 122°22.99' W. long.;
- (79) 36°14.36' N. lat., 122°21.19' W. long.;
- (80) 36°09.50' N. lat., 122°14.25' W. long.;
- (81) 35°51.50' N. lat., 121°55.92' W. long.;
- (82) 35°49.53' N. lat., 122°13.00' W. long.;
- (83) 34°58.30' N. lat., 121°36.76' W. long.;
- (84) 34°53.13' N. lat., 121°37.49' W. long.;
- (85) 34°46.54' N. lat., 121°46.25' W. long.;

- (86) 34°37.81' N. lat., 121°35.72' W. long.;
- (87) 34°37.72' N. lat., 121°27.35' W. long.;
- (88) 34°26.77' N. lat., 121°07.58' W. long.;
- (89) 34°18.54' N. lat., 121°05.01' W. long.;
- (90) 34°02.68' N. lat., 120°54.30' W. long.;
- (91) 33°48.11' N. lat., 120°25.46' W. long.;
- (92) 33°42.54' N. lat., 120°38.24' W. long.;
- (93) 33°46.26' N. lat., 120°43.64' W. long.;
- (94) 33°40.71' N. lat., 120°51.29' W. long.;
- (95) 33°33.14' N. lat., 120°40.25' W. long.;
- (96) 32°51.57' N. lat., 120°23.35' W. long.;
- (97) 32°38.54' N. lat., 120°09.54' W. long.;
- (98) 32°35.76' N. lat., 119°53.43' W. long.;
- (99) 32°29.54' N. lat., 119°46.00' W. long.;
- (100) 32°25.99' N. lat., 119°41.16' W. long.;
- (101) 32°30.46' N. lat., 119°33.15' W. long.;
- (102) 32°23.47' N. lat., 119°25.71' W. long.;
- (103) 32°19.19' N. lat., 119°13.96' W. long.;
- (104) 32°13.18' N. lat., 119°04.44' W. long.;
- (105) 32°13.40' N. lat., 118°51.87' W. long.;
- (106) 32°19.62' N. lat., 118°47.80' W. long.;
- (107) 32°27.26' N. lat., 118°50.29' W. long.;

- (108) 32°28.42' N. lat., 118°53.15' W. long.;
- (109) 32°31.30' N. lat., 118°55.09' W. long.;
- (110) 32°33.04' N. lat., 118°53.57' W. long.;
- (111) 32°19.07' N. lat., 118°27.54' W. long.;
- (112) 32°18.57' N. lat., 118°18.97' W. long.;
- (113) 32°09.01' N. lat., 118°13.96' W. long.;
- (114) 32°06.57' N. lat., 118°18.78' W. long.;
- (115) 32°01.32' N. lat., 118°18.21' W. long.; and
- (116) 31°57.82' N. lat., 118°10.34' W. long.;

(b) Astoria Canyon. Astoria Canyon is defined by straight lines connecting all of the following points in the order stated:

- 46°06.48' N. lat., 125°05.46' W. long.;
- 46°03.00' N. lat., 124°57.36' W. long.;
- 46°02.28' N. lat., 124°57.66' W. long.;
- 46°01.92' N. lat., 125°02.46' W. long.;
- 45°48.72' N. lat., 124°56.58' W. long.;
- 45°47.70' N. lat., 124°52.20' W. long.;
- 45°40.86' N. lat., 124°55.62' W. long.;
- 45°29.82' N. lat., 124°54.30' W. long.;
- 45°25.98' N. lat., 124°56.82' W. long.;
- 45°26.04' N. lat., 125°10.50' W. long.;
- 45°33.12' N. lat., 125°16.26' W. long.;

45°40.32' N. lat., 125°17.16' W. long.;

46°03.00' N. lat., 125°14.94' W. long.;

and connecting back to 46°06.48' N. lat., 125°05.46' W. long.

(c) Daisy Bank / Nelson Island. Daisy Bank / Nelson Island is defined by straight lines connecting all of the following points in the order stated:

44°39.73' N. lat., 124°41.43' W. long.;

44°39.60' N. lat., 124°41.29' W. long.;

44°37.17' N. lat., 124°38.60' W. long.;

44°35.55' N. lat., 124°39.27' W. long.;

44°37.57' N. lat., 124°41.70' W. long.;

44°36.90' N. lat., 124°42.91' W. long.;

44°38.25' N. lat., 124°46.28' W. long.;

44°38.52' N. lat., 124°49.11' W. long.;

44°40.27' N. lat., 124°49.11' W. long.;

44°41.35' N. lat., 124°48.03' W. long.;

and connecting back to 44°39.73' N. lat., 124°41.43' W. long.

(d) Newport Rockpile / Stonewall Bank. Newport Rockpile / Stonewall Bank is defined by straight lines connecting all of the following points in the order stated:

44°27.61' N. lat., 124°26.93' W. long.;

44°34.64' N. lat., 124°26.82' W. long.;

44°38.15' N. lat., 124°25.15' W. long.;

44°37.78' N. lat., 124°23.05' W. long.;

44°28.82' N. lat., 124°18.80' W. long.;

44°25.16' N. lat., 124°20.69' W. long.;

and connecting back to 44°27.61' N. lat., 124°26.93' W. long.

(e) Cherry Bank. Cherry Bank is within the Cowcod Conservation Area West, an area south of Point Conception, and is defined by straight lines connecting all of the following points in the order stated:

32°59.00' N. lat., 119°32.05' W. long.;

32°59.00' N. lat., 119°17.05' W. long.;

32°46.00' N. lat., 119°17.05' W. long.;

32°46.00' N. lat., 119°32.05' W. long.;

and connecting back to 32°59.00' N. lat., 119°32.05' W. long.

(f) Potato Bank. Potato Bank is within the Cowcod Conservation Area West, an area south of Point Conception, and is defined by straight lines connecting all of the following points in the order stated:

33°30.00' N. lat., 120°00.06' W. long.;

33°30.00' N. lat., 119°50.06' W. long.;

33°20.00' N. lat., 119°50.06' W. long.;

33°20.00' N. lat., 120°00.06' W. long.;

and connecting back to 33°30.00' N. lat., 120°00.06' W. long.

(g) Olympic 2. Olympic 2 is defined by straight lines

connecting all of the following points in the order stated:

48°21.46' N. lat., 124°51.61' W. long.;

48°17.00' N. lat., 124°57.18' W. long.;

48°06.13' N. lat., 125°00.68' W. long.;

48°06.66' N. lat., 125°06.55' W. long.;

48°08.44' N. lat., 125°14.61' W. long.;

48°22.57' N. lat., 125°09.82' W. long.;

48°21.42' N. lat., 125°03.55' W. long.;

48°22.99' N. lat., 124°59.29' W. long.;

48°23.89' N. lat., 124°54.37' W. long.;

and connecting back to 48°21.46' N. lat., 124°51.61' W. long.

(h) Biogenic 1. Biogenic 1 is defined by straight lines connecting all of the following points in the order stated:

47°29.97' N. lat., 125°20.14' W. long.;

47°30.01' N. lat., 125°30.06' W. long.;

47°40.09' N. lat., 125°50.18' W. long.;

47°47.27' N. lat., 125°50.06' W. long.;

47°47.00' N. lat., 125°24.28' W. long.;

47°39.53' N. lat., 125°10.49' W. long.;

47°30.31' N. lat., 125°08.81' W. long.;

and connecting back to 47°29.97' N. lat., 125°20.14' W. long.

(i) Biogenic 2. Biogenic 2 is defined by straight lines connecting all of the following points in the order stated:

47°08.77' N. lat., 125°00.91' W. long.;

47°08.82' N. lat., 125°10.01' W. long.;

47°20.01' N. lat., 125°10.00' W. long.;

47°20.00' N. lat., 125°01.25' W. long.;

and connecting back to 47°08.77' N. lat., 125°00.91' W. long.

(j) Biogenic 3. Biogenic 3 is defined by straight lines connecting all of the following points in the order stated:

46°48.16' N. lat., 125°10.75' W. long.;

46°40.00' N. lat., 125°10.00' W. long.;

46°40.00' N. lat., 125°20.01' W. long.;

46°50.00' N. lat., 125°20.00' W. long.;

and connecting back to 46°48.16' N. lat., 125°10.75' W. long.

(k) Grays Canyon. Grays Canyon is defined by straight lines connecting all of the following points in the order stated:

46°51.55' N. lat., 125°00.00' W. long.;

46°56.79' N. lat., 125°00.00' W. long.;

46°58.01' N. lat., 124°55.09' W. long.;

46°55.07' N. lat., 124°54.14' W. long.;

46°59.60' N. lat., 124°49.79' W. long.;

46°58.72' N. lat., 124°48.78' W. long.;

46°54.45' N. lat., 124°48.36' W. long.;

46°53.99' N. lat., 124°49.95' W. long.;

46°54.38' N. lat., 124°52.73' W. long.;

46°52.38' N. lat., 124°52.02' W. long.;

46°48.93' N. lat., 124°49.17' W. long.;

and connecting back to 46°51.55' N. lat., 125°00.00' W. long.

(l) Tolo Bank. Tolo Bank is defined by straight lines connecting all of the following points in the order stated:

39°58.75' N. lat., 124°04.58' W. long.;

39°56.05' N. lat., 124°01.45' W. long.;

39°53.99' N. lat., 124°00.17' W. long.;

39°52.28' N. lat., 124°03.12' W. long.;

39°57.90' N. lat., 124°07.07' W. long.;

and connecting back to 39°58.75' N. lat., 124°04.58' W. long.

(m) Point Sur Deep. The Point Sur Deep is defined by straight lines connecting all of the following points in the order stated:

36°25.25' N. lat., 122°11.61' W. long.;

36°16.05' N. lat., 122°14.37' W. long.;

36°16.14' N. lat., 122°15.94' W. long.;

36°17.98' N. lat., 122°15.93' W. long.;

36°17.83' N. lat., 122°22.56' W. long.;

36°22.33' N. lat., 122°22.99' W. long.;

36°26.00' N. lat., 122°20.81' W. long.;

and connecting back to 36°25.25' N. lat., 122°11.61' W. long.

(n) Point Arena Offshore. Point Arena Offshore is defined by

straight lines connecting all of the following points in the order stated:

39°03.32' N. lat., 123°51.15' W. long.;

38°56.54' N. lat., 123°49.79' W. long.;

38°54.12' N. lat., 123°52.69' W. long.;

38°59.64' N. lat., 123°55.02' W. long.;

39°02.83' N. lat., 123°55.21' W. long.;

and connecting back to 39°03.32' N. lat., 123°51.15' W. long.

(o) Blunts Reef. Blunts Reef is defined by straight lines connecting all of the following points in the order stated:

40°27.53' N. lat., 124°26.84' W. long.;

40°24.66' N. lat., 124°29.49' W. long.;

40°28.50' N. lat., 124°32.42' W. long.;

40°30.46' N. lat., 124°32.23' W. long.;

40°30.21' N. lat., 124°26.85' W. long.;

and connecting back to 40°27.53' N. lat., 124°26.84' W. long.

(p) Biogenic Area 12. Biogenic Area 12 is defined by straight lines connecting all of the following points in the order stated:

38°35.49' N. lat., 123°34.79' W. long.;

38°32.86' N. lat., 123°41.09' W. long.;

38°34.92' N. lat., 123°42.53' W. long.;

38°35.74' N. lat., 123°43.82' W. long.;

38°47.28' N. lat., 123°51.19' W. long.;

38°49.50' N. lat., 123°45.83' W. long.;

38°41.22' N. lat., 123°41.76' W. long.;

and connecting back to 38°35.49' N. lat., 123°34.79' W. long.

(q) Half Moon Bay. Half Moon Bay is defined by straight lines connecting all of the following points in the order stated:

37°18.14' N. lat., 122°31.15' W. long.;

37°19.80' N. lat., 122°34.70' W. long.;

37°19.28' N. lat., 122°38.76' W. long.;

37°23.54' N. lat., 122°40.75' W. long.;

37°25.41' N. lat., 122°33.20' W. long.;

37°23.28' N. lat., 122°30.71' W. long.;

and connecting back to 37°18.14' N. lat., 122°31.15' W. long.

(r) TNC/ED Area 2. TNC/ED Area 2 is defined by straight lines connecting all of the following points in the order stated:

36°17.83' N. lat., 122°22.56' W. long.;

36°17.98' N. lat., 122°15.93' W. long.;

36°16.14' N. lat., 122°15.94' W. long.;

36°10.82' N. lat., 122°15.97' W. long.;

36°15.84' N. lat., 121°56.35' W. long.;

36°14.27' N. lat., 121°53.89' W. long.;

36°10.93' N. lat., 121°48.66' W. long.;

36°07.40' N. lat., 121°43.14' W. long.;

36°04.89' N. lat., 121°51.34' W. long.;

35°55.70' N. lat., 121°50.02' W. long.;

35°53.05' N. lat., 121°56.69' W. long.;

35°38.99' N. lat., 121°49.73' W. long.;

35°20.06' N. lat., 121°27.00' W. long.;

35°20.54' N. lat., 121°35.84' W. long.;

35°02.49' N. lat., 121°35.35' W. long.;

35°02.79' N. lat., 121°26.30' W. long.;

34°58.71' N. lat., 121°24.21' W. long.;

34°47.24' N. lat., 121°22.40' W. long.;

34°35.70' N. lat., 121°45.99' W. long.;

35°47.36' N. lat., 122°30.25' W. long.;

35°27.26' N. lat., 122°45.15' W. long.;

35°34.39' N. lat., 123°00.25' W. long.;

36°01.64' N. lat., 122°40.76' W. long.;

36°17.41' N. lat., 122°41.22' W. long.;

and connecting back to 36°17.83' N. lat., 122°22.56' W. long.

(s) TNC/ED Area 1. TNC/ED Area 1 is defined by straight lines connecting all of the following points in the order stated:

34°45.09' N. lat., 121°05.73' W. long.;

34°39.90' N. lat., 121°10.30' W. long.;

34°43.39' N. lat., 121°14.73' W. long.;

34°52.83' N. lat., 121°14.85' W. long.;

34°52.82' N. lat., 121°05.90' W. long.;

and connecting back to 34°45.09' N. lat., 121°05.73' W. long.

(t) TNC/ED Area 3. TNC/ED Area 3 is defined by straight lines connecting all of the following points in the order stated:

34°29.24' N. lat., 120°36.05' W. long.;

34°28.57' N. lat., 120°34.44' W. long.;

34°26.81' N. lat., 120°33.21' W. long.;

34°24.54' N. lat., 120°32.23' W. long.;

34°23.41' N. lat., 120°30.61' W. long.;

33°53.05' N. lat., 121°05.19' W. long.;

34°13.64' N. lat., 121°20.91' W. long.;

34°40.04' N. lat., 120°54.01' W. long.;

34°36.41' N. lat., 120°43.48' W. long.;

34°33.50' N. lat., 120°43.72' W. long.;

34°31.22' N. lat., 120°42.06' W. long.;

34°30.04' N. lat., 120°40.27' W. long.;

34°30.02' N. lat., 120°40.23' W. long.;

34°29.26' N. lat., 120°37.89' W. long.;

and connecting back to 34°29.24' N. lat., 120°36.05' W. long.

(u) Nehalem Bank / Shale Pile. Nehalem Bank / Shale Pile is defined by straight lines connecting all of the following points in the order stated:

46°00.599' N. lat., 124°33.943' W. long.;

45°52.775' N. lat., 124°28.754' W. long.;

45°47.948' N. lat., 124°31.699' W. long.;

45°52.755' N. lat., 124°39.200' W. long.;

45°58.020' N. lat., 124°38.989' W. long.;

46°00.833' N. lat., 124°36.775' W. long.;

and connecting back to 46°00.599' N. lat., 124°33.943' W. long.

(v) Bandon High Spot. Bandon High Spot is defined by straight lines connecting all of the following points in the order stated:

43°08.829' N. lat., 124°50.926' W. long.;

43°08.769' N. lat., 124°49.815' W. long.;

43°05.161' N. lat., 124°49.047' W. long.;

43°02.940' N. lat., 124°46.868' W. long.;

42°57.182' N. lat., 124°46.006' W. long.;

42°56.096' N. lat., 124°47.481' W. long.;

42°56.659' N. lat., 124°48.786' W. long.;

42°52.894' N. lat., 124°52.592' W. long.;

42°53.822' N. lat., 124°55.759' W. long.;

42°57.557' N. lat., 124°54.104' W. long.;

42°57.997' N. lat., 124°52.988' W. long.;

43°00.386' N. lat., 124°51.769' W. long.;

43°02.639' N. lat., 124°52.007' W. long.;

43°04.598' N. lat., 124°53.013' W. long.;

43°05.885' N. lat., 124°51.603' W. long.;

and connecting back to 43°08.829' N. lat., 124°50.926' W. long.

(w) Heceta Bank. Heceta Bank is defined by straight lines connecting all of the following points in the order stated:

43°57.678' N. lat., 124°55.482' W. long.;

44°00.144' N. lat., 124°55.254' W. long.;

44°02.880' N. lat., 124°53.964' W. long.;

44°13.470' N. lat., 124°54.078' W. long.;

44°20.298' N. lat., 124°38.718' W. long.;

44°13.518' N. lat., 124°40.446' W. long.;

44°09.000' N. lat., 124°45.300' W. long.;

44°03.462' N. lat., 124°45.708' W. long.;

44°03.258' N. lat., 124°49.416' W. long.;

43°58.614' N. lat., 124°49.872' W. long.;

and connecting back to 43°57.678' N. lat., 124°55.482' W. long.

(x) Rogue Canyon. Rogue Canyon is defined by straight lines connecting all of the following points in the order stated:

42°41.328' N. lat., 125°16.614' W. long.;

42°41.550' N. lat., 125°03.048' W. long.;

42°35.286' N. lat., 125°02.214' W. long.;

42°34.110' N. lat., 124°55.620' W. long.;

42°30.606' N. lat., 124°54.972' W. long.;

42°23.814' N. lat., 124°52.854' W. long.;

42°17.940' N. lat., 125°10.170' W. long.;

and connecting back to 42°41.328' N. lat., 125°16.614' W. long.

(y) Deepwater off Coos Bay. Deepwater off Coos Bay is defined by straight lines connecting all of the following points in the order stated:

43°29.316' N. lat., 125°20.112' W. long.;

43°38.964' N. lat., 125°18.750' W. long.;

43°37.878' N. lat., 125°08.256' W. long.;

43°36.576' N. lat., 125°06.558' W. long.;

43°33.036' N. lat., 125°08.406' W. long.;

43°27.738' N. lat., 125°07.254' W. long.;

43°15.954' N. lat., 125°07.836' W. long.;

43°15.384' N. lat., 125°10.470' W. long.;

43°25.728' N. lat., 125°19.356' W. long.;

and connecting back to 43°29.316' N. lat., 125°20.112' W. long.

(z) Siletz Deepwater. Siletz Deepwater is defined by straight lines connecting all of the following points in the order stated:

44°42.720' N. lat., 125°18.486' W. long.;

44°56.262' N. lat., 125°12.612' W. long.;

44°56.340' N. lat., 125°09.126' W. long.;

44°49.926' N. lat., 125°01.506' W. long.;

44°46.932' N. lat., 125°02.832' W. long.;

44°41.964' N. lat., 125°10.638' W. long.;

44°33.360' N. lat., 125°08.820' W. long.;

44°33.384' N. lat., 125°17.082' W. long.;

and connecting back to 44°42.720' N. lat., 125°18.486' W. long.

9. Section 660.396 is added to read as follows:

§ 660.396 Groundfish Essential Fish Habitat (EFH) (continued).

In § 660.302, essential fish habitat (EFH) is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity." Areas are designated to "minimize adverse impacts to EFH to the extent practicable." Straight lines connecting a series of Latitude/longitude coordinates designating the large-scale boundaries for areas designated as groundfish EFH. Coordinates outlining the boundaries of EFH areas are provided in §§ 660.395 through 660.397. Fishing activity that is prohibited or permitted within a particular area designated as a groundfish EFH Conservation Area is detailed at § 660.306 and § 660.381.

(a) Hidden Reef / Kidney Bank. Hidden Reef / Kidney Bank is defined by straight lines connecting all of the following points in the order stated:

33°48.00' N. lat., 119°15.06' W. long.;

33°48.00' N. lat., 118°57.06' W. long.;

33°33.00' N. lat., 118°57.06' W. long.;

33°33.00' N. lat., 119°15.06' W. long.;

and connecting back to 33°48.00' N. lat., 119°15.06' W. long.

(b) Eel River Canyon. Eel River Canyon is defined by straight lines connecting all of the following points in the order stated:

40°38.27' N. lat., 124°27.16' W. long.;

40°35.60' N. lat., 124°28.75' W. long.;

40°37.52' N. lat., 124°33.41' W. long.;

40°37.47' N. lat., 124°40.46' W. long.;

40°35.47' N. lat., 124°42.97' W. long.;

40°32.78' N. lat., 124°44.79' W. long.;

40°24.32' N. lat., 124°39.97' W. long.;

40°23.26' N. lat., 124°42.45' W. long.;

40°27.34' N. lat., 124°51.21' W. long.;

40°32.68' N. lat., 125°05.63' W. long.;

40°49.12' N. lat., 124°47.41' W. long.;

40°44.32' N. lat., 124°46.48' W. long.;

40°40.75' N. lat., 124°47.51' W. long.;

40°40.65' N. lat., 124°46.02' W. long.;

40°39.69' N. lat., 124°33.36' W. long.;

and connecting back to 40°38.27' N. lat., 124°27.16' W. long.

(c) Davidson Seamount. Davidson Seamount is defined by straight lines connecting all of the following points in the order stated:

35°40.50' N. lat., 122°46.59' W. long.;
35°42.04' N. lat., 122°45.79' W. long.;
35°43.25' N. lat., 122°44.49' W. long.;
35°46.00' N. lat., 122°43.02' W. long.;
35°47.08' N. lat., 122°41.46' W. long.;
35°46.56' N. lat., 122°40.52' W. long.;
35°46.88' N. lat., 122°40.15' W. long.;
35°47.24' N. lat., 122°40.47' W. long.;
35°47.95' N. lat., 122°39.83' W. long.;
35°47.47' N. lat., 122°39.26' W. long.;
35°40.73' N. lat., 122°44.74' W. long.;
35°40.24' N. lat., 122°45.76' W. long.;

and connecting back to 35°40.50' N. lat., 122°46.59' W. long.

(d) Cordell Bank. Cordell Bank is located offshore of California's Marin County defined by straight lines connecting all of the following points in the order stated:

38°04.05' N. lat., 123°07.28' W. long.;
38°02.84' N. lat., 123°07.36' W. long.;
38°01.09' N. lat., 123°07.06' W. long.;
38°01.02' N. lat., 123°22.08' W. long.;
37°54.75' N. lat., 123°23.64' W. long.;
37°46.01' N. lat., 123°25.62' W. long.;

37°46.68' N. lat., 123°27.05' W. long.;

37°47.66' N. lat., 123°28.18' W. long.;

37°50.26' N. lat., 123°30.94' W. long.;

37°54.41' N. lat., 123°32.69' W. long.;

37°56.94' N. lat., 123°32.87' W. long.;

37°57.12' N. lat., 123°25.04' W. long.;

37°59.43' N. lat., 123°27.29' W. long.;

38°00.82' N. lat., 123°29.61' W. long.;

38°02.31' N. lat., 123°30.88' W. long.;

38°03.99' N. lat., 123°30.75' W. long.;

38°04.85' N. lat., 123°30.36' W. long.;

38°04.88' N. lat., 123°27.85' W. long.;

38°04.44' N. lat., 123°24.44' W. long.;

38°03.05' N. lat., 123°21.33' W. long.;

38°05.77' N. lat., 123°06.83' W. long.;

and connecting back to 38°04.05' N. lat., 123°07.28' W. long.

(e) Cordell Bank (within 50 fm isobath). Cordell Bank (within 50 fm isobath) is located offshore of California's Marin County defined by straight lines connecting all of the following points in the order stated:

37°57.62' N. lat., 123°24.22' W. long.;

37°57.70' N. lat., 123°25.25' W. long.;

37°59.47' N. lat., 123°26.63' W. long.;
38°00.24' N. lat., 123°27.87' W. long.;
38°00.98' N. lat., 123°27.65' W. long.;
38°02.81' N. lat., 123°28.75' W. long.;
38°04.26' N. lat., 123°29.25' W. long.;
38°04.55' N. lat., 123°28.32' W. long.;
38°03.87' N. lat., 123°27.69' W. long.;
38°04.27' N. lat., 123°26.68' W. long.;
38°02.67' N. lat., 123°24.17' W. long.;
38°00.87' N. lat., 123°23.15' W. long.;
37°59.32' N. lat., 123°22.52' W. long.;
37°58.24' N. lat., 123°23.16' W. long.;

and connecting back to 37°57.62' N. lat., 123°24.22' W. long.

(f) Cowcod Conservation Area East. Cowcod Conservation Area East is an area west of San Diego defined by straight lines connecting all of the following points in the order stated:

32°41.15' N. lat., 118°02.00' W. long.;
32°42.00' N. lat., 118°02.00' W. long.;
32°42.00' N. lat., 117°50.00' W. long.;
32°36.70' N. lat., 117°50.00' W. long.;
32°30.00' N. lat., 117°53.50' W. long.;
32°30.00' N. lat., 118°02.00' W. long.;

32°40.49' N. lat., 118°02.00' W. long.;

and connecting back to 32°41.15' N. lat., 118°02.00' W. long.

(g) Thompson Seamount. Thompson Seamount is defined by straight lines connecting all of the following points in the order stated:

46°06.93' N. lat., 128°39.77' W. long.;

46°06.76' N. lat., 128°39.60' W. long.;

46°07.80' N. lat., 128°39.43' W. long.;

46°08.50' N. lat., 128°34.39' W. long.;

46°06.76' N. lat., 128°29.36' W. long.;

46°03.64' N. lat., 128°28.67' W. long.;

45°59.64' N. lat., 128°31.62' W. long.;

45°56.87' N. lat., 128°33.18' W. long.;

45°53.92' N. lat., 128°39.25' W. long.;

45°54.26' N. lat., 128°43.42' W. long.;

45°56.87' N. lat., 128°45.85' W. long.;

46°00.86' N. lat., 128°46.02' W. long.;

46°03.29' N. lat., 128°44.81' W. long.;

46°06.24' N. lat., 128°42.90' W. long.;

and connecting back to 46°06.93' N. lat., 128°39.77' W. long.

(h) President Jackson Seamount. President Jackson Seamount is defined by straight lines connecting all of the following points in the order stated:

42°21.41' N. lat., 127°42.91' W. long.;

42°21.96' N. lat., 127°43.73' W. long.;

42°23.78' N. lat., 127°46.09' W. long.;

42°26.05' N. lat., 127°48.64' W. long.;

42°28.60' N. lat., 127°52.10' W. long.;

42°31.06' N. lat., 127°55.02' W. long.;

42°34.61' N. lat., 127°58.84' W. long.;

42°37.34' N. lat., 128°01.48' W. long.;

42°39.62' N. lat., 128°05.12' W. long.;

42°41.81' N. lat., 128°08.13' W. long.;

42°43.44' N. lat., 128°10.04' W. long.;

42°44.99' N. lat., 128°12.04' W. long.;

42°48.27' N. lat., 128°15.05' W. long.;

42°51.28' N. lat., 128°15.05' W. long.;

42°53.64' N. lat., 128°12.23' W. long.;

42°52.64' N. lat., 128°08.49' W. long.;

42°51.64' N. lat., 128°06.94' W. long.;

42°50.27' N. lat., 128°05.76' W. long.;

42°48.18' N. lat., 128°03.76' W. long.;

42°45.45' N. lat., 128°01.94' W. long.;

42°42.17' N. lat., 127°57.57' W. long.;

42°41.17' N. lat., 127°53.92' W. long.;

42°38.80' N. lat., 127°49.92' W. long.;

42°36.43' N. lat., 127°44.82' W. long.;

42°33.52' N. lat., 127°41.36' W. long.;

42°31.24' N. lat., 127°39.63' W. long.;

42°28.33' N. lat., 127°36.53' W. long.;

42°23.96' N. lat., 127°35.89' W. long.;

42°21.96' N. lat., 127°37.72' W. long.;

42°21.05' N. lat., 127°40.81' W. long.;

and connecting back to 42°21.41' N. lat., 127°42.91' W. long.

(i) Catalina Island. Catalina Island is defined by straight lines connecting all of the following points in the order stated:

33°34.71' N. lat., 118°11.40' W. long.;

33°25.88' N. lat., 118°03.76' W. long.;

33°11.69' N. lat., 118°09.21' W. long.;

33°19.73' N. lat., 118°35.41' W. long.;

33°23.90' N. lat., 118°35.11' W. long.;

33°25.68' N. lat., 118°41.66' W. long.;

33°30.25' N. lat., 118°42.25' W. long.;

33°32.73' N. lat., 118°38.38' W. long.;

33°27.07' N. lat., 118°20.33' W. long.;

and connecting back to 33°34.71' N. lat., 118°11.40' W. long.

(j) Monterey Bay / Canyon. Monterey Bay / Canyon is defined

by straight lines connecting all of the following points in the order stated:

36°38.21' N. lat., 121°55.96' W. long.;
36°25.31' N. lat., 121°54.86' W. long.;
36°25.25' N. lat., 121°58.34' W. long.;
36°30.86' N. lat., 122°00.45' W. long.;
36°30.02' N. lat., 122°09.85' W. long.;
36°30.23' N. lat., 122°36.82' W. long.;
36°55.08' N. lat., 122°36.46' W. long.;
36°51.41' N. lat., 122°14.14' W. long.;
36°49.37' N. lat., 122°15.20' W. long.;
36°48.31' N. lat., 122°18.59' W. long.;
36°45.55' N. lat., 122°18.91' W. long.;
36°40.76' N. lat., 122°17.28' W. long.;
36°39.88' N. lat., 122°09.69' W. long.;
36°44.94' N. lat., 122°08.46' W. long.;
36°47.37' N. lat., 122°03.16' W. long.;
36°49.60' N. lat., 122°00.85' W. long.;
36°51.53' N. lat., 121°58.25' W. long.;
36°50.78' N. lat., 121°56.89' W. long.;
36°47.39' N. lat., 121°58.16' W. long.;
36°48.34' N. lat., 121°50.95' W. long.;

36°47.23' N. lat., 121°52.25' W. long.;

36°45.60' N. lat., 121°54.17' W. long.;

36°44.76' N. lat., 121°56.04' W. long.;

36°41.68' N. lat., 121°56.33' W. long.;

and connecting back to 36°38.21' N. lat., 121°55.96' W. long.

(k) Farallon Islands / Fanny Shoal. Farallon Islands, Fanny Shoal is defined by straight lines connecting all of the following points in the order stated:

37°51.58' N. lat., 123°14.07' W. long.;

37°44.51' N. lat., 123°01.50' W. long.;

37°41.71' N. lat., 122°58.38' W. long.;

37°40.80' N. lat., 122°58.54' W. long.;

37°39.87' N. lat., 122°59.64' W. long.;

37°42.05' N. lat., 123°03.72' W. long.;

37°43.73' N. lat., 123°04.45' W. long.;

37°49.23' N. lat., 123°16.81' W. long.;

and connecting back to 37°51.58' N. lat., 123°14.07' W. long.

(l) Delgada Canyon. Delgada Canyon is defined by straight lines connecting all of the following points in the order stated:

40°07.13' N. lat., 124°09.09' W. long.;

40°06.58' N. lat., 124°07.39' W. long.;

40°01.18' N. lat., 124°08.84' W. long.;

40°02.48' N. lat., 124°12.93' W. long.;

40°05.71' N. lat., 124°09.42' W. long.;

40°07.18' N. lat., 124°09.61' W. long.;

and connecting back to 40°07.13' N. lat., 124°09.09' W. long.

(m) Mendocino Ridge. Mendocino Ridge is defined by straight lines connecting all of the following points in the order stated:

40°25.23' N. lat., 124°24.06' W. long.;

40°12.50' N. lat., 124°22.59' W. long.;

40°14.40' N. lat., 124°35.82' W. long.;

40°16.16' N. lat., 124°39.01' W. long.;

40°17.47' N. lat., 124°40.77' W. long.;

40°19.26' N. lat., 124°47.97' W. long.;

40°19.98' N. lat., 124°52.73' W. long.;

40°20.06' N. lat., 125°02.18' W. long.;

40°11.79' N. lat., 125°07.39' W. long.;

40°12.55' N. lat., 125°11.56' W. long.;

40°12.81' N. lat., 125°12.98' W. long.;

40°20.72' N. lat., 125°57.31' W. long.;

40°23.96' N. lat., 125°56.83' W. long.;

40°24.04' N. lat., 125°56.82' W. long.;

40°25.68' N. lat., 125°09.77' W. long.;

40°21.03' N. lat., 124°33.96' W. long.;

40°25.72' N. lat., 124°24.15' W. long.;

and connecting back to 40°25.23' N. lat., 124°24.06' W. long.

(n) Anacapa Island SMCA. Anacapa Island SMCA is defined by straight lines connecting all of the following points in the order stated:

34°04.00' N. lat., 119°26.70' W. long.;

34°05.00' N. lat., 119°26.70' W. long.;

34°05.00' N. lat., 119°24.60' W. long.;

34°04.00' N. lat., 119°24.60' W. long.

(o) Anacapa Island SMR. Anacapa Island SMR is defined by straight lines connecting all of the following points in the order stated:

34°04.00' N. lat., 119°24.60' W. long.;

34°05.00' N. lat., 119°24.60' W. long.;

34°05.00' N. lat., 119°21.40' W. long.;

34°04.00' N. lat., 119°21.40' W. long.

(p) Carrington Point. Carrington Point is defined by straight lines connecting all of the following points in the order stated:

34°01.30' N. lat., 120°05.20' W. long.;

34°04.00' N. lat., 120°05.20' W. long.;

34°04.00' N. lat., 120°01.00' W. long.;

34°00.50' N. lat., 120°01.00' W. long.

(q) Footprint. Footprint is defined by straight lines connecting all of the following points in the order stated:

33°57.50' N. lat., 119°31.00' W. long.;

33°54.11' N. lat., 119°31.00' W. long.;

33°54.11' N. lat., 119°26.00' W. long.;

33°57.14' N. lat., 119°26.00' W. long.

(r) Gull Island. Gull Island is defined by straight lines connecting all of the following points in the order stated:

33°55.29' N. lat., 119°53.00' W. long.;

33°51.63' N. lat., 119°53.00' W. long.;

33°51.63' N. lat., 119°48.00' W. long.;

33°54.26' N. lat., 119°48.00' W. long.

(s) Harris Point. Harris Point is defined by straight lines connecting all of the following points in the order stated:

34°09.33' N. lat., 120°23.30' W. long.;

34°12.50' N. lat., 120°23.30' W. long.;

34°12.50' N. lat., 120°18.40' W. long.;

34°06.22' N. lat., 120°18.40' W. long.;

34°09.33' N. lat., 120°23.30' W. long.;

(t) Judith Rock. Judith Rock is defined by straight lines connecting all of the following points in the order stated:

34°01.80' N. lat., 120°26.60' W. long.;

33°58.50' N. lat., 120°26.60' W. long.;

33°58.50' N. lat., 120°25.30' W. long.;

34°01.50' N. lat., 120°25.30' W. long.

(u) Painted Cove. Painted Cove is defined by straight lines

connecting all of the following points in the order stated:

34°04.50' N. lat., 119°53.00' W. long.;

34°05.20' N. lat., 119°53.00' W. long.;

34°05.00' N. lat., 119°51.00' W. long.;

34°04.00' N. lat., 119°51.00' W. long.

(v) Richardson Rock. Richardson Rock is defined by straight lines connecting all of the following points in the order stated:

34°08.40' N. lat., 120°33.79' W. long.;

34°08.40' N. lat., 120°34.20' W. long.;

34°08.01' N. lat., 120°34.20' W. long.;

34°04.19' N. lat., 120°34.20' W. long.;

34°03.60' N. lat., 120°34.20' W. long.;

34°03.60' N. lat., 120°33.52' W. long.;

34°02.21' N. lat., 120°30.92' W. long.;

34°02.21' N. lat., 120°36.29' W. long.;

34°10.40' N. lat., 120°36.29' W. long.;

34°10.40' N. lat., 120°28.20' W. long.;

34°08.40' N. lat., 120°28.20' W. long.;

34°08.40' N. lat., 120°28.68' W. long.

(w) Santa Barbara. Santa Barbara is defined by straight lines connecting all of the following points in the order stated:

33°28.50' N. lat., 118°58.20' W. long.;

33°24.90' N. lat., 119°02.20' W. long.;

33°21.78' N. lat., 119°02.20' W. long.;

33°21.78' N. lat., 118°54.54' W. long.;

33°28.50' N. lat., 118°54.54' W. long.

(x) Scorpion. Scorpion is defined by straight lines connecting all of the following points in the order stated:

34°06.25' N. lat., 119°35.50' W. long.;

34°09.35' N. lat., 119°35.50' W. long.;

34°09.35' N. lat., 119°32.80' W. long.;

34°06.25' N. lat., 119°32.80' W. long.

(y) Skunk Point. Skunk Point is defined by straight lines connecting all of the following points in the order stated:

33°59.00' N. lat., 119°58.80' W. long.;

33°59.00' N. lat., 119°58.02' W. long.;

33°57.10' N. lat., 119°58.00' W. long.;

33°57.10' N. lat., 119°58.20' W. long.

(z) South Point. South Point is defined by straight lines connecting all of the following points in the order stated:

33°50.48' N. lat., 120°06.50' W. long.;

33°51.29' N. lat., 120°10.00' W. long.;

33°50.40' N. lat., 120°10.00' W. long.;

33°50.40' N. lat., 120°06.50' W. long.

ENFORCEMENT CONSULTANTS REPORT ON AMENDMENT 19
(ESSENTIAL FISH HABITAT)

The Enforcement Consultants (EC) met in August with the Groundfish Management Team. During the discussion several options were provided on how to deal with regulatory language describing gear restrictions.

The EC's recommendation was to list allowable gear in restricted areas. This strategy was based on marine reserve personnel concern with development of new or undefined gear that may be used in the future with negative impacts. The approach was to list allowable activity versus prohibited activity.

The GMT's recommendation to list prohibited gear or activity is just as effective but may create a situation where some gear in the future may have to be defined and added to the list if found to have negative impacts.

Additionally, in reviewing Supplemental Attachment 3, we noted in two places where there is an attempt to limit recreational gear to 6 oz. of weight, however, the language only limited the size of the individual weight and not the total amount of weight that could be used. [Section 660.306 (12) 66.370(3)].

PFMC
09/21/05

GROUND FISH ADVISORY SUBPANEL REPORT ON
AMENDMENT 19 (ESSENTIAL FISH HABITAT)

The Groundfish Advisory Subpanel (GAP) has the following recommendations on essential fish habitat (EFH) related language in Agenda Item F.3.a, Attachment 1.

1. Page 28, Section 6.2.4. The Habitat Conservation Framework. The GAP feels that clarification is needed. The third sentence should be replaced by:
“The Council shall recommend that the Habitat Committee or another committee designated by the Council review the areas currently closed to bottom trawling, and recommend the elimination of existing areas or the addition of new areas, or modification of the extent and location of existing areas.”
This would direct the effort to modify fishing activities for habitat conservation through the Council for review and consideration before going through committees. This gives the public and the Council opportunity to judge the merit of the proposal before extensive time is spent in committee.
2. Page 55, Section 6.9.4. Facilitating Public Private Partnerships to Reduce Capacity. The GAP wants to see the following language inserted as part of the fifth sentence after the word “conditions”:
“... while at the same time taking into account impacts on segments of the fishing industry and fishing communities that are not a party to the contracts, and taking into account related objectives 13, 15,16,17, stated on Page 7.”
3. Change Agenda Item F.4.a, Supplemental Attachment 3 to better reflect Agenda Item F.3.a, Attachment 1. Add bullet 15A: “Recreational Fishing Gear including hook and line, spear.” This should be done to capture the use of spear fishing as a recreational gear type.
4. The GAP would like to bring to the Council’s attention the following concern. We will not meet the goals of protecting EFH in the non-trawl areas which are located within the tribal usual and accustomed (UA) areas. Tribal fishers have their right and may continue to exercise the right to continue to trawl within these areas. Little benefit to EFH will be derived from EFH designation if all users are not in agreement on fishing practices. Nontribal fishers are disadvantaged with little benefit to EFH. Tribal fisheries have nowhere to go outside their UA areas. They have been placed in a position where they are faulted for exercising their treaty rights. The GAP encourages the Council to refer this matter to the review committee referenced in section 6.2.4 (page 28).

GROUND FISH MANAGEMENT TEAM REPORT ON AMENDMENT 19 (ESSENTIAL FISH HABITAT)

The Groundfish Management Team (GMT) met jointly with representatives from Enforcement Consultants (EC) in August, and received an update from Mr. Steve Copps, National Marine Fisheries Service, on the draft regulatory strategy to implement the Council's action for the protection of groundfish Essential Fish Habitat (EFH). The group collectively reviewed the action taken by the Council and noted that there are varying degrees of prohibited activity, depending on the area. For example, most of the areas were closed specifically to bottom trawl gear, while four specific areas were closed to all bottom contact gear (President Jackson and Thompson Seamounts off Oregon, and Davidson Seamount and Cordell Bank off California). For the closures only pertaining to bottom trawl gear, there is also a difference coastwide in that Scottish seine gear was specifically exempted from the bottom trawl closures off California. Also, the specific areas within the Channel Islands National Marine Sanctuary (CINMS) were closed to all fishing.

Through our discussion, enforcement representatives strongly encouraged that regulatory language reflect that all activity would be prohibited, unless otherwise allowed. While the GMT recognizes the merits behind this approach, we struggled with applying it in regulatory language, given that most of the areas only prohibit one or a few gear types. If we were to follow the advice from enforcement, we would have to list a multitude of gear types (recreational and commercial) that would be allowed vs. only listing one or a few that would be prohibited. Again, we do recognize the merits of the concept and, over the long-term, would like to work with EC to evaluate how this approach can be used in the future.

It is our understanding that regulatory language addressing areas closed to all fishing, such as the areas within the CINMS, is fairly easy to craft. However, given the different regulatory levels of the other areas, the GMT recommends creating categories to which differing regulations would apply:

1. Bottom Trawl Closed Areas (BTCAs) – These areas would be closed to bottom trawl gear as currently defined (which includes Scottish seine gear). Regulations would be drafted which refer to prohibited gear (and all other legal gears would be allowed). For those areas exempting Scottish seine gear, it is recommended that California Department of Fish and Game work with Enforcement Consultants to provide an enforceable definition of Scottish seine gear, which may be excluded from specific areas off California (while not changing the current federal definition of bottom trawl gear).
2. Bottom Contact Closed Areas (BCCAs) – These areas would be closed to legal gears that routinely contact the bottom through normal fishing practices. Regulations would be drafted which refer to prohibited gear (and all other gears would be allowed). The GMT understands that the following legal gears listed in the fishery management plan (FMP) would be included in the list of prohibited gear types: bottom trawl, longline, pots, and traps, and for these areas, Scottish seine gear would

not be exempted. The GMT notes that these gears may need to be clarified in regulatory language to specify which types of gear and equipment under Section 660.302 would be prohibited. There may be additional gears not specified in the FMP that the states may wish to prohibit.

It is the GMT's understanding that under both categories listed above, midwater trawl gear would continue to be allowed. However, given the current definition of midwater trawl gear, which refers to trawl gear with "unprotected footrope," the GMT recommends that a more specific definition be developed with representatives of EC and the Groundfish Advisory Subpanel (GAP) as part of the 2007-2008 specifications and management process.

It is anticipated that draft regulatory language will be ready for our review at the GMT's October meeting in Seattle. The GMT also recommends a review of the regulatory language by EC and GAP representatives as well.

GMT Recommendations:

1. Develop area categories for BTCAs and BCCAs with different regulations, as described above.
2. Keep Scottish seine gear included in the definition of bottom trawl gear, but add a separate definition of Scottish seine gear to specifically exempt that gear type from BTCAs off California.
3. GMT requests guidance on revising the definition of midwater trawl gear for 2007-2008 management (i.e., this can be done by creating gear specifications, which could be very difficult, and/or by using catch limits of species found on the bottom—e.g., crab).

PFMC
09/19/05

HABITAT COMMITTEE REPORT ON
AMENDMENT 19 – (ESSENTIAL FISH HABITAT)

The Habitat Committee (HC) reviewed draft fishery management plan (FMP) amendatory language addressing the groundfish essential fish habitat (EFH). We believe the draft language accurately captures the intent of the Council's June 2005 decision identifying its preferred alternative. The HC has the following more detailed comments:

1. Section 6.2.4 Habitat Conservation Framework (page 28), the HC is identified as the body with responsibility to review and make recommendations regarding areas currently closed to fishing. We are concerned that HC in its present form has neither the full range of expertise nor the time resources to thoroughly conduct such analyses. The HC may need additional resources in order to fulfill the intent of this section. We also suggest that the phrase "*or its advisory bodies*" be struck from the sixth sentence of that paragraph, since we believe all proposals and HC tasks should be vetted through the Council prior to initiation of any work effort.
2. We recommend adding a sentence to the first paragraph of section 7.1 (page 59) indicating that artificial structures are specifically excluded from this definition of substrate except as provided in Section 7.3.1.6 (Oil Production Platforms, Page 67). The assumption is that artificial structures are not included as EFH unless specifically identified through habitat areas of particular concern or amendment processes.
3. In Section 7.2 (Page 60), we suggest the phrase "*sea bottom*" be replaced with "*substrate*," to ensure consistency with the Magnuson-Stevens Fishery Conservation and Management Act definition.

Commercial Fishermen of Santa Barbara, Inc.

6 Harbor Way #155, Santa Barbara, CA 93109

August 12, 2005

Mr. John DeVore, Groundfish Staff Officer
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 200
Portland, OR 97220-1384

COPY

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AUG 22 2005

PFMC

Ms. Susan Ashcraft, Chair, Groundfish Management Team
California Department of Fish and Game
350 Harbor Blvd
Belmont, CA 94110

Mr. Tommy Ghio, Vice-Chair, Groundfish Advisory Subpanel
Ghio Fish Company
1900 Salinas Rd, Ste 77
Moss Landing, CA 95039

RE: GMT, GAP AND COUNCIL DELIBERATIONS ON CHANNEL ISLANDS NATIONAL
MARINE SANCTUARY FEDERAL-WATERS CLOSURES TO PROTECT ESSENTIAL
GROUND FISH HABITAT UNDER AUTHORITY OF THE MAGNUSON-STEVENSON ACT

Ladies and Gentlemen:

Our association members fish out of Santa Barbara Harbor for a wide variety of seafood products using various gear types in the waters of the Santa Barbara Channel, around the Channel Islands, and in the Southern California Bight. We have been continuously and intimately involved in the 6-year process described in the Council's decision summary of June 20, 2005 (*see* http://www.pcouncil.org/groundfish/gfefheis/pfmc_efheis_pa.pdf) related to the subject proposed closures. This involvement includes representation on and participation in the Channel Islands National Marine Sanctuary Advisory Council (SAC) and the Marine Reserve Working Group (MRWG), developed through the SAC process, since the inception of these advisory groups. We are thoroughly familiar with the goals and objectives, policies, issues, scientific background, socioeconomic issues and other aspects of the process that led CINMS to request of the Pacific Fisheries Management Council (PFMC or Council) the subject closures.

We write you now as you begin deliberations on "amendatory language for FMP Amendment 19 (specifying measures to protect West Coast groundfish essential fish habitat)" and "develop draft regulations for protecting West Coast groundfish essential fish habitat..." Specifically, we ask that you give full consideration to marine zoning in the sense described in the National Research Council (National Academy of Science) 2001 review of marine protected areas, as we will describe. Arguably the most unbiased and thorough review of the science, policies, practices and issues surrounding design and implementation of marine protected areas, the NRC MPA report provides specific guidance on ways

to maximize the efficacy of marine protected area design and implementation, and we here offer specific application of that guidance consistent with the NAS Report specifications.

Council Draft Decision of June 20, 2005 on CINMS Federal Waters Marine Protected Areas
(from http://www.pcouncil.org/groundfish/gfefheis/pfmc_efheis_pa.pdf)

On June 20, 2005 at the Council meeting in Foster City, CA, the Council chose an array of areas that, in sum, comprise the preferred alternative of the Draft Environmental Impact Statement in support of designation of essential fish habitat under the Council's Groundfish Management Plan (GMP). The section that describes the preferred alternative as it relates to the CINMS marine reserves proposal is summarized as follows:

Closed to fishing off of California, with exceptions as described:

- Specified areas within the federal waters portion of the Channel Islands National Marine Sanctuary (CINMS) as identified through the six-year multi-party collaborative effort between the state and stakeholders. **All closed areas except for the western Anacapa Island closed area will be "no-take" areas. The western Anacapa Island area will be closed to specified gear types.** These closures will be described in a way that best meets the goals and objectives of the Channel Islands National Marine Sanctuary, **consistent with authorities granted under the Magnuson-Stevens Act** and California state law. [emphasis added]

Three Marine Conservation Zones

Our request is that you give formal consideration to designating three of the nine proposed federal-waters areas as Marine Conservation Zones, instead of Marine Reserve designation. These three areas are currently designated in the Final Environmental Document "Marine Protected Areas in NOAA's Channel Islands National Marine Sanctuary" (CA Department of Fish and Game, October 2002) as "Phase 2" marine protected areas:

- Gull Island (Santa Cruz Island)
- Scorpion Point (Santa Rosa Island)
- Footprint (Anacapa Passage)

It is the firm belief of our membership that designation of these three Federal-waters areas as Marine Conservation Zones can allow epipelagic fisheries to continue with no impact whatsoever on groundfish essential fish habitat, nor, in fact, any impact on the intent, goals and/or objectives of CINMS, MRWG, and the California Fish and Game Commission to protect representative habitat types and ecosystems in and around Sanctuary waters. It would be appropriate at this juncture to remind the GMT, GAP, Councilmembers and staff that the Council's Scientific and Statistical Committee (SSC), in a report to the Council on the CINMS marine reserves' science panel report on sizing of marine reserves (*see* <http://www.pcouncil.org/reserves/recent/sscreport.html>), at the request of the Council, advised the Council as follows:

...just as it is important to recognize the uncertainties inherent in traditional fishery management, it is also important to recognize the uncertainties associated with reserves as a management tool. Integration of reserves with traditional

fishery management will require innovative thinking and careful consideration of costs and benefits.

We submit to you that the designation of these three areas as marine conservation zones is precisely the kind of innovative and integrative process that was envisioned by the SSC to take careful consideration of costs and benefits of marine protected area design and implementation. The benefits to essential groundfish habitat of excluding epipelagic fisheries in these three areas are marginal to non-existent, and certainly unsupported by any empirical evidence whatsoever. However, the costs of so doing are real, tangible, and cumulative in the context of the very large Rockfish Conservation Zone and Shelf Closure Zone, and along with the decision to further prohibit bottom trawling along the entire West Coast outside of 700 fathoms, as determined in the current EFH decision by the Council.

In its review of the CINMS/DFG CEQA-equivalency document supporting the decision process on MPAs in CINMS (see <http://www.pcouncil.org/reserves/recent/sscreport0602.html>), the SSC further advised the Council that:

CEQA requires that the proposed project be evaluated in terms of potentially adverse effects on the environment - including direct, indirect and cumulative effects - and that feasible mitigation measures be adopted to address significant adverse effects. A relevant issue in this regard is whether effort displacement from reserve areas causes adverse environmental effects outside reserves. Specifically, to what extent would effort displacement adversely affect the physical and natural habitat by intensifying the effects of fishing operations outside reserves? To what extent would effort displacement exacerbate existing pressure on fishery resources outside reserves?

Given that there are only certain areas where salmon, white seabass, swordfish, thresher shark, and other epipelagic fishes are found, and only in certain years when water conditions are right, there is a small and finite number of places that epipelagic fisheries take place around Channel and Island waters. It is nearly certain that the kind of adverse effects that the SSC notes to the Council, i.e., displacement from epipelagic fisheries in these three reserve areas and the consequent "congestion externality" described by fisheries economists in other contexts, will have adverse impacts on epipelagic fish stocks outside these areas. This is the most likely outcome, since fewer areas will be fished by the same number of vessels, thereby increasing harvest pressure on fishable stocks outside the protected area network. Thus, in the context of overall sustainability in the design and implementation of such a network of marine protected areas envisioned by the MRWG and discussed in the NRC MPA Report, permitting epipelagic fisheries within these three marine protected areas facilitates minimizing environmental impacts, preserves benefits to groundfish essential fish habitat, and is consonant with the goals and objectives of MRWG, the California Fish and Game Commission, and, we submit, the Council's interest in innovatively integrating marine protected area design and implementation with traditional fisheries management tools. This proposal is both a feasible mitigation measure and good overall fisheries management practice.

In its final report to the Council on marine reserves (*see* http://www.pcouncil.org/reserves/recent/ssc_mr_wp_rfinal.pdf), the SSC discusses potential ecosystem effects of design and implementation. The SSC notes:

Given the limited information regarding density, numbers, biomass, size, and diversity of organisms, it may be more feasible to characterize alternatives in terms of the extent to which they protect relevant habitat types. Consideration should be given to impacts both within the reserve and in the area open to fishing. Given the difficulty of directly evaluating any adverse effects in the open area, it may be necessary to rely on indirect indicators: e.g., the amounts and types of effort shifted to the open area, the size of the fishing grounds over which this effort is likely to be dispersed, the habitat types likely to be occupied by this effort.

This note is another clear and directed observation by the SSC to advise the Council that the concern for redirecting fishing effort outside reserves, and the potential for ecosystem effects derived from that effort congestion, should be an important consideration for the Council in its development of design and implementation of any marine protected area network.

The SSC also concludes in its final report (see above URL reference):

Management effectiveness is not achieved by focusing *a priori* on any particular regulatory measure but by determining which measure (or combinations of measures) would be most effective in addressing the objective. To accomplish this, it is important that the range of feasible solutions not be unduly restricted from the outset. The Council's EIS on the 2003 groundfish management specifications provides a good illustration of this point. While area closures were integral to achieving the Council's objective, the objective could not have been achieved without combining those closures with other types of management measures.

This is an other clear indication that the advise given by the SSC to the Council, rather than having an *a priori* regulatory measure in mind (e.g. complete closure to all types of fishing), implies that the Council should keep an open mind about the range of feasible solutions to achieve objectives, which in this case includes balancing protection of essential groundfish habitat and overall biodiversity with socioeconomic impacts of regulatory actions.

The three marine protected areas noted above are currently proposed as full no-take zones, prohibiting all types of fishing gear. We will describe the ongoing epipelagic fisheries in each of these areas that we believe may be permitted without affecting essential groundfish habitat or the intent of the MRWG process.

Gull Island

This area south of the western portion of Santa Cruz Island has been used historically by harpoon and drift net fishermen to take swordfish and by driftnet fishermen for thresher shark. It is also used, when water conditions are right, as one of the only places in the Santa Barbara Channel where purse seine vessels may sometimes catch bluefin tuna that occasionally ascend the deepwater canyon that approaches Santa Cruz Island from the south.

Further, the take of white seabass, thresher, mako or yellowtail in no way involves groundfish essential fish habitat. This particular island bathymetry drops off quickly and steeply into relatively deep water (200 fathoms or more). Shark and white seabass driftnetting takes place in the epipelagic area confined

to the top 100 feet of the water column. This epipelagic portion of the water column is not essential groundfish habitat unless, as the PFMCA originally designated after the 1996 Sustainable Fisheries Act amendments to the Magnuson-Stevens Act, one considers anything "wet and salty" as essential groundfish habitat. Fortunately, that approach to designation of EFH has already failed the ocean conservation community and federal court litmus test.

In no way do these fisheries interact with groundfish essential fish habitat. Because this is true, we request that the GMT and GAP recommend to the Council that the Gull Island federal-waters area currently proposed for designation as a marine reserve be instead designated as a marine conservation area, specifically to permit continued epipelagic fishing for the coastal pelagic and pelagic species historically fished in that area. This change in no way runs counter to the conservation and protection goals of essential groundfish habitat, and is also consistent with the intent of the NRC MPA guidelines for design and implementation of marine protected areas, as well as with the goals and objectives of CINMS and its MRWG in protecting representative habitat areas in Sanctuary waters. We therefore request that you recommend to the Council the designation of the Gull Island marine protected area as a marine conservation zone and not a marine reserve, with the specific caveat that fishing for the above species be permitted in the Gull Island zone.

Footprint

This area south of the Anacapa Passage (between Santa Cruz and Anacapa Islands) has historically been fished with harpoon and/or drift gillnet for thresher and mako sharks, for swordfish, and for white seabass, as with the Gull Island area. For all of the reasons stated above for the Gull Island Marine Conservation Zone, we believe that the Footprint area should also be designated as a Marine Conservation Area, and that this designation will not adversely affect essential groundfish habitat nor is it dissonant with the goals and objectives of the CINMS MRWG or the design and implementation criteria outlined in the NRC MPA Report. Please give careful consideration to the designation of the Footprint federal-waters marine protected area as a marine conservation zone, not a marine reserve, in which fishing for the above-named species using the gear types described is permitted.

Scorpion

The area north of Scorpion Pt. and anchorage on the north side of Santa Cruz Island has been used traditionally to catch salmon, white seabass, thresher and mako shark, and, when water conditions are right, yellowtail. Salmon trolling, like drift net fishing for the other species, occurs in epipelagic waters, confined to, at most, the top 30 fathoms (180 feet) of the water column. Thus the interaction with salmon trolling gear and essential groundfish habitat is insignificant at most.

With respect to trolling for salmon in the Southern California Bight generally, there is no ecological or management reason to prohibit one group of salmon trollers while permitting another group; the inconsistency of this management application has absolutely no merit or grounding in fishery management practice or marine conservation ecology, particularly in light of the facts that cumulatively, sport salmon trollers using the Santa Barbara Channel in certain years collectively take more salmon than commercial trollers, and the fact that commercial trollers have been using the more fish-friendly barbless hooks for salmon in the Southern California Bight for years, while sport trollers are still using the relatively unsustainable practice of using barbed hooks for salmon. If sport trolling for salmon is to be allowed in the Scorpion marine protected area, so then should commercial trolling for salmon. The

application of marine protected areas for biodiversity protection and fishery management has been described as many things by many observers, but has never been described or intended as a user-group resource allocation strategy.

Likewise, sport fishing for white seabass will be allowed in the Scorpion area. Precisely the same argument can be made for even-handed treatment of sport and commercial fishing for white seabass as for salmon: this area should not be used as a resource allocation instrument among various marine resource user groups.

It is therefore our firm belief that both sport and commercial epipelagic fishing for salmon and white seabass, and drift net fishing for the two species of shark and (in certain years) yellowtail, should be permitted in the Scorpion marine protected area, and it should be designated as a marine conservation zone and not a marine reserve. Please give this modification to the current proposal for groundfish EFH protection under the Magnuson-Stevens Act your most careful consideration.

Other authoritative sources for decision-making on marine reserves vs. marine conservation zones

Because such attention has been focused on marine zoning and the conservation of marine biodiversity over the last decade, a number of authoritative reports and plans have addressed various aspects of design and implementation of marine protected areas. Below, relevant concepts from several of these are summarized in the effort to provide the GMT, GAP and Council with a reasonably comprehensive set of guidelines to discuss how best to characterize or zone the CINMS federal-waters marine protected areas.

The National Research Council Marine Protected Areas Report

Chapter 6 of this report details the various design combinations that can be useful for a variety of reasons in order to determine appropriate zones and uses within each of those zones in the design and implementation of networks of marine protected areas. The report summarizes:

MULTIPLE-USE ZONING OF MARINE PROTECTED AREAS

... To accommodate the spectrum of different uses in larger MPAs, zoning plans are required. **Zoning plans will be needed for all but the smallest MPAs because they avoid unnecessary restrictions and facilitate cooperation between managers and users.**

The principal objectives of a zoning plan are usually (Kelleher and Kenchington, 1992)

- to ensure the conservation of the MPA in perpetuity;
- to provide protection for critical or representative habitats, ecosystems, and ecological processes;
- to separate conflicting human activities;
- **to protect the natural and/or cultural qualities of the MPA while allowing a spectrum of reasonable human uses;**
- **to reserve suitable areas for particular human uses, while minimizing the effects of these uses on the MPA;** and
- to preserve some areas of the MPA in their natural state undisturbed by humans except for the purposes of scientific research or education. [emphasis added]

Regarding true adaptive management as applied to zoning of MPAs, the Report concludes:

A management plan for an MPA will require revisions over time to address shortcomings in the performance of the MPA and advances in understanding of how the MPA contributes to resource management. **Hence, some flexibility must be allowed for adjusting the zoning and levels of protection within MPAs.** [emphasis added]

Pew Oceans Commission Report

As the GMT, GAP and Council are aware, the Pew Charitable Trusts developed a blue-ribbon panel of ocean scientists, governance experts and experienced marine users to develop recommendations for future ocean governance and marine resource management. The report, entitled "America's Living Oceans: Charting a Course for Sea Change" can be found online at http://www.pewtrusts.org/pdf/env_pew_oceans_final_report.pdf. This report, in Chapter 2, "Governance for Sustainable Seas," suggests that the U.S. develop regional ocean ecosystem councils, much like the regional fisheries management councils established under the Magnuson Act. The Pew Report notes (p. 54) that:

The regional ocean ecosystem councils should utilize ocean zoning to improve marine resource conservation, actively plan ocean use, and reduce user conflicts. **Ocean zoning should allow for the protection of key habitats or resources while facilitating a variety of human activities.** [emphasis added]

Chapter 11 "Renewing America's Fisheries" also speaks to zoning as a management tool for achieving sustainability in fisheries. Under the heading "Implement Ecosystem-based Fishery Management," (p. 131), the Pew Report suggests:

- Managers should evaluate the life history and habitat requirements of species to determine the appropriate types of area management tools to employ, including spatial and temporal closures, spawning closures, habitat protection areas, bycatch reduction areas, and marine reserves.

This is an explicit recognition that various species exhibit differing life histories and inhabit differing habitats with differing requirements, and that this information should be used intelligently to "determine the appropriate types of area management tools to employ." Thus the Pew Blue Ribbon Panel explicitly recognized that, for example, groundfish and pelagic species utilize distinctly different habitat spaces (particularly in the life history stages normally associated with commercial fisheries), a point we would like to emphasize in support of our request to designate the three above marine protected areas as marine conservation zones, not marine reserves.

In fact, in the most recent Marine Protected Area Newsletter (August, 2005; Vol. 7 No. 2), three Pew Fellows in Marine Conservation write a letter that speaks to this multiple-use zoning issue:

Dear MPA News:

Your July 2005 issue (MPA News 7:1) contained a letter from John Clark, who was responding to an earlier article about the Pew Fellows MPA Action Statement, described in your June issue (6:11). In his letter, John Clark wrote in part: "To say that 10-50% of

all marine ecosystems should become no-take zones ignores reality. In each part of the sea where protection is necessary, **there are areas where no-take is justified within MPA boundaries, and areas where other types of management are more appropriate.**"

We completely agree. The Pew Fellows statement (Recommendation 10) reads: "Place no less than 10% and as much as 50% of each ecosystem in no-take zones, according to identified needs and management options in a particular ecosystem." **Note that 10% of an ecosystem does not necessarily mean 10% of an MPA. No-take MPAs are not always the best answer.** We do suggest that MPAs be linked together into networks. **Within such a network, a number of individual MPAs might allow some extraction.**

The 10% minimum no-take area is, we feel, necessary to monitor and assess the effectiveness of an MPA network. The world's oceans are in free fall, and their problems cannot be reversed or even arrested without significant measures to protect them.

Angel Alcala, Director, Angelo King Center for Research and Environmental Management, Silliman University, Philippines

Kristina M. Gjerde, High Seas Policy Advisor, IUCN Global Marine Program, Poland

Alan White, President, Coastal Conservation and Education Foundation, Inc., Philippines... [emphasis added]

Thus, not only does the Pew Blue-Ribbon Panel Report speak to the need to be mindful of opportunities to protect habitats and ecosystems while not unduly or unreasonably restricting fisheries, current Pew-supported marine conservation fellows concur that within large-scale MPA networks such as that created in the state and federal waters MPAs within CINMS, individual MPAs may allow extraction as an appropriate activity. We again reiterate our firm belief that the three federal-waters areas described above are strong candidates for the application of this reasonable and prudent ecosystem management practice.

US Ocean Commission Report

Like the Pew Oceans Report, the U.S. Ocean Commission was charged by the U.S. Oceans Act of 2000 to comprehensively review the state of U.S. ocean waters and resources, and recommend a course for future sustainable management actions for same. The report, entitled "An Ocean Blueprint for the 21st Century," may be found at http://www.oceancommission.gov/documents/full_color_rpt/welcome.html. In Chapter 6, Coordinating Management in Federal Waters, the U.S. Ocean Commission notes:

Marine protected areas can vary from restricting all activities to limiting only some uses. Examples of activities that might be restricted include oil and gas exploration and production, dredging, dumping, certain types of vessel traffic, fishing, and placing structures on the seabed. Marine protected areas can be set aside permanently or temporarily and can be implemented either seasonally or year-round. **Even within a marine protected area, a particular activity may be allowed in one part of the area but not in others.** [emphasis added]

Thus, fishing in the topmost (epipelagic) portion of the water column in areas that do not materially affect essential groundfish habitat lower in the water column is consonant with this explicit recognition

by the U.S. Ocean Commission of the potential for multiple use designations within a given marine protected area, as we are requesting for the three marine protected areas noted above.

In Chapter 19, Achieving Sustainable Fisheries, the Commission further concludes:

Ultimately, the process for designating and managing EFH should result in the protection of major fish species during vulnerable stages of their life history, while minimizing disruption to the fishing industry or other offshore uses.

In this conclusion, the US Ocean Commission explicitly recognized that the designation of EFH to protect groundfish or other species is not meant to categorically override all other ocean uses, and a specific condition of EFH designation, in the Commission's mind, is that it minimize disruption to the fishing industry. We interpret this to mean that epipelagic fishing such as we here request within three of the nine designated groundfish EFH/CINMS marine protected areas can be allowed in the effort to minimize disruption to these traditional and historic fisheries while still achieving the goals and objectives of EFH protection, ecosystem management and conservation of biodiversity.

Other examples of zoning in the Council's EFH DEIS

As summarized on the Council's website at http://www.pcouncil.org/groundfish/gfefheis/pfmc_efheis_pa.pdf, a large area of the Exclusive Economic Zone was put off limits to trawl fisheries, a number of habitat areas of particular concern were designated, and 20 additional specific areas were closed to bottom trawling. In closing these additional 20 trawl areas, the Council specifically called out that use of a Scottish seine is allowed in these areas. Thus, ample precedent is set for designating essential groundfish habitat while allowing gear types that do not adversely affect essential groundfish habitat in any material way, just as epipelagic fishing gear as described above does not adversely effect groundfish EFH in the three marine protected areas of the CINMS network being proposed. For the purposes of consistency of application of the Magnuson-Stevens Act with respect to designation of EFH, we request that these three areas be designated as marine conservation zones with specific provision for the continuance of use of epipelagic gear types that do not affect EFH for groundfish.

Another example of designation of an EFH area offshore of California that specifically allows certain types of gear to continue fishing in these designated areas is found on page 4 of the Decision Summary document, as follows:

Closed to all bottom-contact gear off of California:

- Cordell Bank (within 50 fathom isobath, vertical hook-and-line allowed)
- Davidson Seamount Area

These closures will be described in a way that best meets the goals and objectives of the Cordell Bank and Monterey National Marine Sanctuaries, consistent with authorities granted under the Magnuson-Stevens Act and California state law.

In this designation example, bottom contact gear is prohibited while vertical hook and line gear is allowed. Discussion at the Council meeting on June 20 and prior regarding Davidson Seamount, if we understood it correctly, specifically includes an area on the top of the Seamount that is open to certain

types of fishing gear. Once again, for consistency's sake and for the purpose of not unduly or unreasonably disrupting fisheries that do not materially impact groundfish EFH, we request that the three areas described above in the CINMS marine protected area network be designated as marine conservation zones specifically to allow the types of fishing that do not impact groundfish EFH, consistent also with the "authority granted under the Magnuson-Stevens Act and California state law."

Enforcement issues

Concerns have been expressed regarding the complication of enforcement of marine protected areas under such multiple use scenarios. We point out that if there are such complications, they have already been built into the EFH designations in several places, as noted above. However, we do not believe that any marginal or additional effort is required to enforce the requested marine conservation zones beyond that already necessary to enforce these areas in any other marine protected area status. If an enforcement vessel is scheduled to cruise in enforcement status across these CINMS mpas, enforcement staff are already supposed to be trained to tell the difference between a drift gill net and a trawl net as deployed in the water (or not). Gear type recognition is already assumed for enforcement purposes. Thus, it should be a simple matter to tell if prohibited or permitted gear is being deployed in these marine conservation zones.

Further, when the Council implements the Vessel Monitoring System fully, vessels will be tracked continuously anyway, so violation of any gear type prohibition will be detected via satellite tracking automatically. Thus, we believe there are no marginal, additional costs or effort generated by designation of the three marine protected areas above that we are requesting as marine conservation zones.

For all of these reasons, we believe it is incumbent on the GMT, the GAP, and the Council to apply the statutes of the Magnuson-Stevens Act and Sustainable Fisheries Act regarding designation of EFH, ecosystem management, and undue disturbance of fisheries, as we have requested for the Gull Island, Scorpion and the Footprint federal-waters marine protected areas. If you or your staff has questions regarding any of the above information or the nature of our request, please do not hesitate to call our President, Mr. Harry Liquornik, at (805) 897-0014. Thank you for giving serious consideration to our request.

Sincerely,

 V.P. For
Harry Liquornik, President

c: Rear Adm. Conrad Lautenbacher, NOAA Undersecretary, U.S. Dept. Commerce
Dr. Don McIsaac, E.D., PFMC
Mr. Don Hansen, Chair, PFMC
Mr. Wayne Heikkila, PFMC HMS Advisory Panel
Mr. Mike Chrisman, Secretary, Resources Agency
Mr. Brian Baird, Deputy Secretary for Ocean Programs, Resources Agency
Mr. Gary Staley, Director, Marine Region
Ms. Marija Vojkovich, Department of Fish and Game

Selected References

National Research Council, Ocean Studies Board, Committee on the Evaluation, Design and Monitoring of Marine Reserves and Protected Areas in the United States. 2001. *Marine Protected Areas: Tools for Sustaining Ocean Ecosystems*. Washington, D.C.: National Academy Press. 272 pp.

Pew Oceans Commission. 2003. America's Living Oceans: Charting a Course for Sea Change. A Report to the Nation, May, 2003 (http://www.pewtrusts.org/pdf/env_pew_oceans_final_report.pdf)

Scientific and Statistical Committee Report on Status of Marine Reserves Proposals for Channel Island National Marine Sanctuary (<http://www.pcouncil.org/reserves/recent/sscreport.html>)

Scientific and Statistical Committee Review of CDFG CEQA analysis of Marine Reserves for CINMS (June 2002) (<http://www.pcouncil.org/reserves/recent/sscreport0602.html>)

SSC White Paper. Marine Reserves: Objectives, Rationales, Fishery Management Implications and Regulatory Requirements(http://www.pcouncil.org/groundfish/gfefheis/C6c_SSC_EFH_July22_04.pdf)

U.S. Commission on Ocean Policy. *An Ocean Blueprint for the 21st Century*. Final Report. Washington, DC, 2004. 626 pp. ISBN#0-9759462-0-X.
(http://www.oceancommission.gov/documents/full_color_rpt/welcome.html)

AMENDMENT 19 (ESSENTIAL FISH HABITAT)

At the June 2005 meeting, the Council identified their preferred alternative for the Pacific Groundfish Fishery Management Plan (FMP) Essential Fish Habitat (EFH) Designation and Minimization of Adverse Impacts Environmental Impact Statement (EIS). The preferred alternative will be described and evaluated in the final EIS, scheduled for publication in January 2006.

At this meeting, the Council will review draft FMP amendment language, which incorporates the appropriate elements of the preferred alternative into the groundfish FMP as Amendment 19. As noted under Agenda Item F.3, there is substantial overlap between the parts of the FMP addressed by Amendment 18 (bycatch mitigation) and Amendment 19. For this reason, a combined document (Agenda Item F.3, Attachment 1), incorporates both Amendment 18 and Amendment 19 changes. Agenda Item F.4, Attachment 1 references the elements of the preferred alternative and indicates where they are addressed in the draft amendment language.

As part of the reorganization of the FMP to incorporate Amendment 18 and the need to include more detailed descriptions of groundfish EFH, four appendices to the FMP are proposed as part of this action. As noted in the draft amendment language, the appendices contain supporting information for the management program. Because these appendices do not describe the management framework or Council groundfish management policies and procedures, and only supplement the required and discretionary provisions of the FMP described in §303 of the Magnuson-Stevens Act, they may be periodically updated without being subjected to the Secretarial review and approval process described in §304(a) of the Magnuson-Stevens Act. The contents of these appendices are listed at the end of the draft amendment package (Agenda Item F.3, Attachment 1). Not all of the material proposed for these appendices is ready at this time. Attachment 2 is a CD-ROM containing appendix materials that are currently available.

The choice of the preferred alternative at the June 2005 meeting is considered final action within the context of the EIS and the Council's public process. Therefore, the Council task at this meeting is to ensure that the draft FMP amendment language is consistent with the preferred alternative identified at the June meeting. Based on Council recommendations, the draft FMP amendment language will be circulated for public review. The revised amendment language would be brought back before the Council in November 2005 for final action. Then, subject to Council approval, it will be submitted to National Marine Fisheries Service (NMFS) for review and Secretarial approval, with a final response expected by early 2006.

The Council also may wish to provide recommendations to NMFS for drafting the regulatory language necessary to implement elements of the preferred alternative.

Council Action:

Adopt FMP Text for Public Review

Reference Materials:

1. Agenda Item F.4.a, Attachment 1: Index of the Elements of the Council's Preferred Alternative for the EFH Final EIS and Corresponding FMP Amendment Language
2. Agenda Item F.4.a, Attachment 2: Draft FMP Appendices (on CD-ROM)
3. Agenda Item F.4.c, Public Comment: Letter from Commercial Fishermen of Santa Barbara, Inc.

Agenda Order:

- a. Agenda Item Overview
- b. Reports and Comments of Advisory Bodies
- c. Public Comment
- d. **Council Action:** Adopt FMP Text for Public Review

Kit Dahl

PFMC
08/31/05

Susan Ashcraft

TABLE 3 (North) to Part 660, Subpart G -- 2005-2006 Trip Limits for Limited Entry Trawl Gear North of 40°10' N. Lat.
Other Limits and Requirements Apply -- Read § 660.301 - § 660.390 before using this table 092005

		JAN-FEB	MAR-APR	MAY-JUN	JUL-AUG	SEP-OCT	NOV-DEC
Rockfish Conservation Area (RCA) ^{6/} :							
North of 40°10' N. lat.		75 fm - modified 200 fm ^{7/}	100 fm - 200 fm				shoreline - 250 fm
Selective flatfish trawl gear is required shoreward of the RCA; all trawl gear (large footrope, selective flatfish trawl, and small footrope trawl gear) is permitted seaward of the RCA. Midwater trawl gear is permitted only for vessels participating in the primary whiting season.							
See § 660.370 and § 660.381 for Additional Gear, Trip Limit, and Conservation Area Requirements and Restrictions. See §§ 660.390-660.394 for Conservation Area Descriptions and Coordinates (including RCAs, YRCA, CCAs, Farallon Islands, and Cordell Banks).							
State trip limits may be more restrictive than federal trip limits, particularly in waters off Oregon and California.							
1	Minor slope rockfish ^{2/} & Darkblotched rockfish	4,000 lb/ 2 months					
2	Pacific ocean perch	3,000 lb/ 2 months					
3	DTS complex						
4	Sablefish						
5	large & small footrope gear	9,500 lb/ 2 months	17,000 lb/ 2 months	18,000 lb/ 2 months		11,000 lb/ 2 months	
6	selective flatfish trawl gear	1,500 lb/ 2 months	10,000 lb/ 2 months	15,000 lb/ 2 months		11,000 lb/ 2 months	
	multiple bottom trawl gear ^{8/}	1,500 lb/ 2 months	9,500 lb/ 2 months	10,000 lb/ 2 months	15,000 lb/ 2 months		11,000 lb/ 2 months
8	Longspine thornyhead						
9	large & small footrope gear	15,000 lb/ 2 months	23,000 lb/ 2 months			7,000 lb/ 2 months	
10	selective flatfish trawl gear	1,000 lb/ 2 months			8,000 lb/ 2 months		7,000 lb/ 2 months
11	multiple bottom trawl gear ^{8/}	1,000 lb/ 2 months			8,000 lb/ 2 months		7,000 lb/ 2 months
12	Shortspine thornyhead						
13	large & small footrope gear	3,500 lb/ 2 months	4,900 lb/ 2 months	5,200 lb/ 2 months		3,500 lb/ 2 months	
14	selective flatfish trawl gear	1,000 lb/ 2 months	3,000 lb/ 2 months	4,000 lb/ 2 months		3,500 lb/ 2 months	
15	multiple bottom trawl gear ^{8/}	1,000 lb/ 2 months	3,000 lb/ 2 months	4,000 lb/ 2 months		3,500 lb/ 2 months	
16	Dover sole						
17	large & small footrope gear	69,000 lb/ 2 months	30,000 lb/ 2 months		35,000 lb/ 2 months	20,000 lb/ 2 months	
18	selective flatfish trawl gear	20,000 lb/ 2 months	35,000 lb/ 2 months	35,000 lb/ 2 months			20,000 lb/ 2 months
19	multiple bottom trawl gear ^{8/}	20,000 lb/ 2 months	35,000 lb/ 2 months	30,000 lb/ 2 months			20,000 lb/ 2 months

TABLE 3 (North)

TABLE 3 (North)

Table 3 (North). Continued

20	Flatfish (except Dover sole)				
21	Other flatfish ^{3/} , English sole & Petrale sole				
22	large & small footrope gear for Other flatfish ^{3/} & English sole	110,000 lb/ 2 months	110,000 lb/ 2 months, no more than 42,000 lb/ 2 months of which may be petrale sole.	110,000 lb/ 2 months, no more than 40,000 lb/ 2 months of which may be petrale sole.	30,000 lb/ 2 months, no more than 2,000 lb/ 2 months of which may be petrale sole.
23	large & small footrope gear for Petrale sole	Not limited			
24	selective flatfish trawl gear	100,000 lb/ 2 months, no more than 25,000 lb/ 2 months of which may be petrale sole.	100,000 lb/ 2 months, no more than 35,000 lb/ 2 months of which may be petrale sole.	90,000 lb/ 2 months, no more than 35,000 lb/ 2 months of which may be petrale sole.	30,000 lb/ 2 months, no more than 2,000 lb/ 2 months of which may be petrale sole.
25	multiple bottom trawl gear ^{8/}	100,000 lb/ 2 months, no more than 25,000 lb/ 2 months of which may be petrale sole.	100,000 lb/ 2 months, no more than 35,000 lb/ 2 months of which may be petrale sole.	90,000 lb/ 2 months, no more than 35,000 lb/ 2 months of which may be petrale sole.	30,000 lb/ 2 months, no more than 2,000 lb/ 2 months of which may be petrale sole.
26	Arrowtooth flounder				
27	large & small footrope gear	Not limited	150,000 lb/ 2 months		50,000 lb/ 2 months
28	selective flatfish trawl gear		70,000 lb/ 2 months		50,000 lb/ 2 months
29	multiple bottom trawl gear ^{8/}		70,000 lb/ 2 months		50,000 lb/ 2 months
30	Whiting				
31	midwater trawl	Before the primary whiting season: CLOSED -- During the primary season: mid-water trawl permitted in the RCA. See §660.373 for season and trip limit details. -- After the primary whiting season: CLOSED			
32	large & small footrope gear	Before the primary whiting season: 20,000 lb/trip -- During the primary season: 10,000 lb/trip -- After the primary whiting season: 10,000 lb/trip			
33	Minor shelf rockfish^{1/}, Shortbelly, Widow & Yelloweye rockfish				
34	midwater trawl for Widow rockfish	Before the primary whiting season: CLOSED -- 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. Mid-water trawl permitted in the RCA. See §660.373 for primary whiting season and trip limit details. -- After the primary whiting season: CLOSED			
35	large & small footrope gear	300 lb/ 2 months			
36	selective flatfish trawl gear	300 lb/ month	1,000 lb/ month, no more than 200 lb/ month of which may be yelloweye rockfish		300 lb/ month
37	multiple bottom trawl gear ^{8/}	300 lb/ month	300 lb/ 2 months, no more than 200 lb/ month of which may be yelloweye rockfish		300 lb/ month

TABLE 3 (North) cont

Table 3 (North). Continued

38	Canary rockfish			
39	large & small footrope gear	CLOSED		
40	selective flatfish trawl gear	100 lb/ month	300 lb/ month	100 lb/ month
41	multiple bottom trawl gear ^{8/}	CLOSED		
42	Yellowtail			
43	midwater trawl	Before the primary whiting season: CLOSED -- 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. Mid-water trawl permitted in the RCA. See §660.373 for primary whiting season and trip limit details. -- After the primary whiting season: CLOSED		
44	large & small footrope gear	300 lb/ 2 months		
45	selective flatfish trawl gear	2,000 lb/ 2 months		
46	multiple bottom trawl gear ^{8/}	300 lb/ 2 months		
47	Minor nearshore rockfish & Black rockfish			
48	large & small footrope gear	CLOSED		
49	selective flatfish trawl gear	300 lb/ month		
50	multiple bottom trawl gear ^{8/}	CLOSED		
51	Lingcod ^{4/}			
52	large & small footrope gear	500 lb/ 2 months		
53	selective flatfish trawl gear	800 lb/ 2 months	1,000 lb/ 2 months	800 lb/ 2 months
54	multiple bottom trawl gear ^{8/}	500 lb/ 2 months		
55	Other Fish ^{5/} & Pacific cod	Not limited		

TABLE 3 (North) con't

1/ Bocaccio, chilipepper and cowcod are included in the trip limits for minor shelf rockfish.

2/ Splitnose rockfish is included in the trip limits for minor slope rockfish.

3/ "Other flatfish" are defined at § 660.302 and include butter sole, curlfin sole, flathead sole, Pacific sanddab, rex sole, rock sole, sand sole, and starry flounder.

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

5/ "Other fish" are defined at § 660.302 and include sharks, skates, ratfish, morids, grenadiers, and kelp greenling.

Cabazon is included in the trip limits for "other fish."

6/ The Rockfish Conservation Area is a gear and/or sector specific closed area generally described by depth contours but specifically defined by lat/long coordinates set out at § 660.390.

7/ The "modified 200 fm" line is modified to exclude certain petrale sole areas from the RCA.

8/ If a vessel has both selective flatfish gear and large or small footrope gear on board during a cumulative limit period (either simultaneously or successively), the most restrictive cumulative limit for any gear on board during the cumulative limit period applies for the entire cumulative limit period.

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

Table 3 (South) to Part 660, Subpart G -- 2005-2006 Trip Limits for Limited Entry Trawl Gear South of 40°10' N. Lat.

Other Limits and Requirements Apply -- Read § 660.301 - § 660.390 before using this table

092005

TABLE 3 (South)

	JAN-FEB	MAR-APR	MAY-JUN	JUL-AUG	SEP-OCT	NOV-DEC
Rockfish Conservation Area (RCA) ^{6/} :						
40°10' - 38° N. lat.	75 fm - modified 200 fm ^{7/}	100 fm - 200 fm	100 fm - 150 fm		shoreline - 250 fm	
38° - 36° N. lat.	75 fm - 150 fm	100 fm - 150 fm				
36° - 34°27' N. lat.	75 fm - 150 fm	100 fm - 150 fm			50 fm - 250 fm	
South of 34°27' N. lat.	75 fm - 150 fm along the mainland coast; shoreline - 150 fm around islands	100 fm - 150 fm along the mainland coast; shoreline - 150 fm around islands			50 fm - 250 fm along the mainland coast; shoreline - 150 fm around islands	

Small footrope gear is required shoreward of the RCA; all trawl gear (large footrope, midwater trawl, and small footrope gear) is permitted seaward of the RCA.

See § 660.370 and § 660.381 for Additional Gear, Trip Limit, and Conservation Area Requirements and Restrictions.
See §§ 660.390-660.394 for Conservation Area Descriptions and Coordinates (including RCAs, YRCA, CCAs, Farallon Islands, and Cordell Banks).

State trip limits may be more restrictive than federal trip limits, particularly in waters off Oregon and California.

1	Minor slope rockfish ^{2/} & Darkblotched rockfish					
2		4,000 lb/ 2 months	8,000 lb/ 2 months	20,000 lb/ 2 months	8,000 lb/ 2 months	6,000 lb/ 2 months
	40°10' - 38° N. lat.					
3	South of 38° N. lat.	40,000 lb/ 2 months				
4	Splitnose					
5		4,000 lb/ 2 months	8,000 lb/ 2 months	20,000 lb/ 2 months	8,000 lb/ 2 months	6,000 lb/ 2 months
	40°10' - 38° N. lat.					
6	South of 38° N. lat.	40,000 lb/ 2 months				
7	DTS complex					
8	Sablefish	14,000 lb/ 2 months		16,000 lb/ 2 months		9,000 lb/ 2 months
9	Longspine thornyhead	19,000 lb / 2 months				11,000 lb/ 2 months
10	Shortspine thornyhead	4,200 lb/ 2 months		4,600 lb/ 2 months		3,500 lb/ 2 months
11	Dover sole	50,000 lb/ 2 months	40,000 lb/ 2 months			30,000 lb/ 2 months
12	Flatfish (except Dover sole)					
13	Other flatfish ^{3/} & English sole					
14		110,000 lb/ 2 months	Other flatfish, English sole & Petrale sole: 110,000 lb/ 2 months, no more than 42,000 lb/ 2 months of which may be petrale sole			30,000 lb/ 2 months
	40°10' - 38° N. lat.					
15						
	South of 38° N. lat.					40,000 lb/ 2 months
16	Petrable sole	No limit				2,000 lb/ 2 months

Table 3 (South). Continued

17	Arrowtooth flounder			
	40°10' - 38° N. lat.	No limit	10,000 lb/ 2 months	10,000 lb/ 2 months
19	South of 38° N. lat.			5,000 lb/ 2 months
20	Whiting			
21	midwater trawl	Before the primary whiting season: CLOSED -- During the primary season: mid-water trawl permitted in the RCA. See §660.373 for season and trip limit details. -- After the primary whiting season: CLOSED		
22	large & small footrope gear	Before the primary whiting season: 20,000 lb/trip -- During the primary season: 10,000 lb/trip -- After the primary whiting season: 10,000 lb/trip		
23	Minor shelf rockfish ^{1/} , Chilipepper, Shortbelly, Widow, & Yelloweye rockfish			
24	large footrope or midwater trawl for Minor shelf rockfish & Shortbelly	300 lb/ month		
25	large footrope or midwater trawl for Chilipepper	2,000 lb/ 2 months	12,000 lb/ 2 months	8,000 lb/ 2 months
26	large footrope or midwater trawl for Widow & Yelloweye	CLOSED		
27	small footrope trawl	300 lb/ month		
28	Bocaccio			
29	large footrope or midwater trawl	300 lb/ 2 months		
30	small footrope trawl	CLOSED		
31	Canary rockfish			
32	large footrope or midwater trawl	CLOSED		
33	small footrope trawl	100 lb/ month	300 lb/ month	100 lb/ month
34	Cowcod	CLOSED		
35	Minor nearshore rockfish & Black rockfish			
36	large footrope or midwater trawl	CLOSED		
37	small footrope trawl	300 lb/ month		
38	Lingcod ^{4/}			
39	large footrope or midwater trawl	500 lb/ 2 months		
40	small footrope trawl	800 lb/ 2 months	1,000 lb/ 2 months	800 lb/ 2 months
41	Other Fish ^{5/} & Cabezon	Not limited		

TABLE 3 (South) cont

TABLE 3 (South) con't

1/ Yellowtail is included in the trip limits for minor shelf rockfish.

2/ POP is included in the trip limits for minor slope rockfish

3/ "Other flatfish" are defined at § 660.302 and include butter sole, curlfin sole, flathead sole, Pacific sanddab, rex sole, rock sole, sand sole, and starry flounder.

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

5/ Other fish are defined at § 660.302 and include sharks, skates, ratfish, morids, grenadiers, and kelp greenling.

Pacific cod is included in the trip limits for "other fish."

6/ The Rockfish Conservation Area is a gear and/or sector specific closed area generally described by depth contours that specifically defined by lat/long coordinates set out at § 660.390.

7/ "modified 200 fm" line is modified to exclude certain petrale sole areas from the RCA.

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

Table 4 (North) to Part 660, Subpart G -- 2005-2006 Trip Limits for Limited Entry Fixed Gear North of 40°10' N. Lat.

Other Limits and Requirements Apply -- Read § 660.301 - § 660.390 before using this table

092005

TABLE 4 (North)

Other Limits and Requirements Apply		JAN-FEB	MAR-APR	MAY-JUN	JUL-AUG	SEP-OCT	NOV-DEC
Rockfish Conservation Area (RCA) ^{6/} :							
North of 46°16' N. lat.		shoreline - 100 fm					
46°16' N. lat. - 40°10' N. lat.		30 fm - 100 fm					
See § 660.370 and § 660.382 for Additional Gear, Trip Limit, and Conservation Area Requirements and Restrictions.							
See §§ 660.390-660.394 for Conservation Area Descriptions and Coordinates (including RCAs, YRCA, CCAs, Farallon Islands, and Cordell Banks).							
State trip limits may be more restrictive than federal trip limits, particularly in waters off Oregon and California.							
1	Minor slope rockfish ^{2/} & Darkblotched rockfish	4,000 lb/ 2 months					
2	Pacific ocean perch	1,800 lb/ 2 months					
3	Sablefish	300 lb/ day, or 1 landing per week of up to 900 lb, not to exceed 3,600 lb/ 2 months				500 lb/ day, or 1 landing per week of up to 1,500 lb, not to exceed 9,000 lb/ 2 months	
4	Longspine thornyhead	10,000 lb/ 2 months					
5	Shortspine thornyhead	2,000 lb/ 2 months					
6	Dover sole	5,000 lb/ month					
7	Arrowtooth flounder	South of 42° N. lat., when fishing for "other flatfish," vessels using hook-and-line gear with no more than 12 hooks per line, using hooks no larger than "Number 2" hooks, which measure 11 mm (0.44 inches) point to shank, and up to 1 lb (0.45 kg) of weight per line are not subject to the RCAs.					
8	Petrale sole						
9	English sole						
10	Other flatfish ^{1/}						
11	Whiting	10,000 lb/ trip					
12	Minor shelf rockfish ^{2/} , Shortbelly, Widow, & Yellowtail rockfish	200 lb/ month					
13	Canary rockfish	CLOSED					
14	Yelloweye rockfish	CLOSED					
15	Minor nearshore rockfish & Black rockfish						
16	North of 42° N. lat.	5,000 lb/ 2 months, no more than 1,200 lb of which may be species other than black or blue rockfish ^{3/}					
17	42° - 40°10' N. lat.	5,000 lb/ 2 months, no more than 1,200 lb of which may be species other than black or blue rockfish ^{3/}			6,000 lb/ 2 months, no more than 1,200 lb of which may be species other than black or blue rockfish ^{3/}		
18	Lingcod ^{4/}	CLOSED		800 lb/ 2 months			CLOSED
19	Other fish ^{5/} & Pacific cod	Not limited					

TABLE 4 (North)

1/ "Other flatfish" are defined at § 660.302 and include butter sole, curlfin sole, flathead sole, Pacific sanddab, rex sole, rock sole, sand sole, and starry flounder.

2/ Bocaccio, chilipepper and cowcod are included in the trip limits for minor shelf rockfish and splitnose rockfish is included in the trip limits for minor slope rockfish.

3/ For black rockfish north of Cape Alava (48°09.50' N. lat.), and between Destruction Is. (47°40' N. lat.) and Leadbetter Pnt. (46°38.17' N. lat.), there is an additional limit of 100 lb or 30 percent by weight of all fish on board, whichever is greater, per vessel, per fishing trip.

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

5/ "Other fish" are defined at § 660.302 and include sharks, skates, ratfish, morids, grenadiers, and kelp greenling. Cabezon is included in the trip limits for "other fish."

6/ The Rockfish Conservation Area is a gear and/or sector specific closed area generally described by depth contours but specifically defined by lat/long coordinates set out at § 660.390.

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

Table 4 (South) to Part 660, Subpart G -- 2005-2006 Trip Limits for Limited Entry Fixed Gear South of 40°10' N. Lat.

Other Limits and Requirements Apply -- Read § 660.301 - § 660.390 before using this table

092005

		JAN-FEB	MAR-APR	MAY-JUN	JUL-AUG	SEP-OCT	NOV-DEC
Fish Conservation Area (RCA) ^{5/} :							
40°10' - 34°27' N. lat.		30 fm - 150 fm		20 fm - 150 fm		30 fm - 150 fm	
South of 34°27' N. lat.		60 fm - 150 fm (also applies around islands)					
See § 660.370 and § 660.382 for Additional Gear, Trip Limit, and Conservation Area Requirements and Restrictions. See §§ 660.390-660.394 for Conservation Area Descriptions and Coordinates (including RCAs, YRCA, CCAs, Farallon Islands, and Cordell Banks).							
State trip limits may be more restrictive than federal trip limits, particularly in waters off Oregon and California.							
1	Minor slope rockfish ^{2/} & Darkblotched rockfish	40,000 lb/ 2 months					
2	Splitnose	40,000 lb/ 2 months					
3	Sablefish						
4	40°10' - 36° N. lat.	300 lb/ day, or 1 landing per week of up to 900 lb, not to exceed 3,600 lb/ 2 months				500 lb/ day, or 1 landing per week of up to 1,500 lb, not to exceed 9,000 lb/ 2 months	
5	South of 36° N. lat.	350 lb/ day, or 1 landing per week of up to 1,050 lb					
6	Longspine thornyhead	10,000 lb / 2 months					
7	Shortspine thornyhead	2,000 lb/ 2 months					
8	Dover sole	5,000 lb/ month When fishing for "other flatfish," vessels using hook-and-line gear with no more than 12 hooks per line, using hooks no larger than "Number 2" hooks, which measure 11 mm (0.44 inches) point to shank, and up to 1 lb (0.45 kg) of weight per line are not subject to the RCAs.					
9	Arrowtooth flounder						
10	Petrable sole						
	English sole						
12	Other flatfish ^{1/}						
13	Whiting	10,000 lb/ trip					
14	Minor shelf rockfish ^{2/} , Shortbelly, & Widow rockfish						
15	40°10' - 34°27' N. lat.	300 lb/ 2 months	CLOSED	200 lb/ 2 months		300 lb/ 2 months	
16	South of 34°27' N. lat.	2,000 lb/ 2 months		2,000 lb/ 2 months		3,000 lb/ 2 months	
17	Chilipepper rockfish	2,000 lb/ 2 months, this opportunity only available seaward of the nontrawl RCA					
18	Canary rockfish	CLOSED					
19	Yelloweye rockfish	CLOSED					
20	Cowcod	CLOSED					
21	Bocaccio						
22	40°10' - 34°27' N. lat.	200 lb/ 2 months	CLOSED	100 lb/ 2 months	300 lb/ 2 months		
23	South of 34°27' N. lat.	300 lb/ 2 months		300 lb/ 2 months			
24	Minor nearshore rockfish & Black rockfish						
25	Shallow nearshore	300 lb/ 2 months	CLOSED	500 lb/ 2 months	600 lb/ 2 months	500 lb/ 2 months	300 lb/ 2 months
26	Deeper nearshore						
	40°10' - 34°27' N. lat.	500 lb/ 2 months	CLOSED	500 lb/ 2 months		400 lb/ 2 months	500 lb/ 2 months
28	South of 34°27' N. lat.			600 lb/ 2 months			400 lb/ 2 months
29	California scorpionfish	300 lb/ 2 months	CLOSED	300 lb/ 2 months	400 lb/ 2 months		300 lb/ 2 months

TABLE 4 (South)

TABLE 4 (South)

Table 4 (South). Continued

30	Lingcod ^{3/}	CLOSED	800 lb/ 2 months	CLOSED	
31	Other fish ^{4/} & Cabezon	Not limited			

1/ "Other flatfish" are defined at § 660.302 and include butter sole, curlfin sole, flathead sole, Pacific sanddab, rex sole, rock sole, sand sole, and starry flounder.

2/ POP is included in the trip limits for minor slope rockfish. Yellowtail is included in the trip limits for minor shelf rockfish.

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

4/ "Other fish" are defined at § 660.302 and include sharks, skates, ratfish, morids, grenadiers, and kelp greenling. Pacific cod is included in the trip limits for "other fish."

5/ The Rockfish Conservation Area is a gear and/or sector specific closed area generally described by depth contours but specifically defined by lat/long coordinates set out at § 660.390.

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

Table 5 (North) to Part 660, Subpart G -- 2005-2006 Trip Limits for Open Access Gears North of 40°10' N. Lat.

Other Limits and Requirements Apply -- Read § 660.301 - § 660.390 before using this table

092005

		JAN-FEB	MAR-APR	MAY-JUN	JUL-AUG	SEP-OCT	NOV-DEC
Fishing Conservation Area (RCA) ^{6/} :							
North of 46°16' N. lat.		shoreline - 100 fm					
46°16' N. lat. - 40°10' N. lat.		30 fm - 100 fm					
See § 660.370 and § 660.383 for Additional Gear, Trip Limit, and Conservation Area Requirements and Restrictions. See §§ 660.390-660.394 for Conservation Area Descriptions and Coordinates (including RCAs, YRCA, CCAs, Farallon Islands, and Cordell Banks).							
State trip limits may be more restrictive than federal trip limits, particularly in waters off Oregon and California.							
1	Minor slope rockfish ^{1/} & Darkblotched rockfish	Per trip, no more than 25% of weight of the sablefish landed					
2	Pacific ocean perch	100 lb/ month					
3	Sablefish	300 lb/ day, or 1 landing per week of up to 900 lb, not to exceed 3,600 lb/ 2 months				500 lb/ day, or 1 landing per week of up to 1,500 lb, not to exceed 9,000 lb/ 2 months	
4	Thornyheads	CLOSED					
5	Dover sole	3,000 lb/month, no more than 300 lb of which may be species other than Pacific sanddabs. South of 42° N. lat., when fishing for "other flatfish," vessels using hook-and-line gear with no more than 12 hooks per line, using hooks no larger than "Number 2" hooks, which measure 11 mm (0.44 inches) point to shank, and up to 1 lb (0.45 kg) of weight per line are not subject to the RCAs.					
6	Arrowtooth flounder						
7	Petrale sole						
8	English sole						
9	Other flatfish ^{2/}						
10	Whiting	300 lb/ month					
	Minor shelf rockfish ^{1/} , Shortbelly, Widow, & Yellowtail rockfish	200 lb/ month					
12	Canary rockfish	CLOSED					
13	Yelloweye rockfish	CLOSED					
14	Minor nearshore rockfish & Black rockfish						
15	North of 42° N. lat.	5,000 lb/ 2 months, no more than 1,200 lb of which may be species other than black or blue rockfish ^{3/}					
16	42° - 40°10' N. lat.	5,000 lb/ 2 months, no more than 1,200 lb of which may be species other than black or blue rockfish ^{3/}			6,000 lb/ 2 months, no more than 1,200 lb of which may be species other than black or blue rockfish ^{3/}		
17	Lingcod ^{4/}	CLOSED		300 lb/ month			CLOSED
18	Other Fish ^{5/} & Pacific cod	Not limited					
19	PINK SHRIMP NON-GROUNDFISH TRAWL (not subject to RCAs)						
20	North	Effective April 1 - October 31: groundfish 500 lb/day, multiplied by the number of days of the trip, not to exceed 1,500 lb/trip. The following sublimits also apply and are counted toward the overall 500 lb/day and 1,500 lb/trip groundfish limits: lingcod 300 lb/month (minimum 24 inch size limit); sablefish 2,000 lb/month; canary, thornyheads and yelloweye rockfish are PROHIBITED. All other groundfish species taken are managed under the overall 500 lb/day and 1,500 lb/trip groundfish limits. Landings of these species count toward the per day and per trip groundfish limits and do not have species-specific limits. The amount of groundfish landed may not exceed the amount of pink shrimp landed.					
21	SALMON TROLL						
22	North	Salmon trollers may retain and land up to 1 lb of yellowtail rockfish for every 2 lbs of salmon landed, with a cumulative limit of 200 lb/month, both within and outside of the RCA. This limit is within the 200 lb per month combined limit for minor shelf rockfish, widow rockfish and yellowtail rockfish, and not in addition to that limit. All groundfish species are subject to the open access limits, seasons and RCA restrictions listed in the table above.					

TABLE 5 (North)

Table 5 (North). Continued

1/ Bocaccio, chilipepper and cowcod rockfishes are included in the trip limits for minor shelf rockfish.

Splitnose rockfish is included in the trip limits for minor slope rockfish.

2/ "Other flatfish" are defined at § 660.302 and include butter sole, curlfin sole, flathead sole, Pacific sanddab, rex sole, rock sole, sand sole, and starry flounder.

3/ For black rockfish north of Cape Alava (48°09.50' N. lat.), and between Destruction Is. (47°40' N. lat.) and Leadbetter Pnt. (46°38.17' 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.

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

5/ "Other fish" are defined at § 660.302 and include sharks, skates, ratfish, morids, grenadiers, and kelp greenling.

Cabazon is included in the trip limits for "other fish."

6/ The Rockfish Conservation Area is a gear and/or sector specific closed area generally described by depth contours but specifically defined by lat/long coordinates set out at § 660.390.

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

Table 5 (South) to Part 660, Subpart G -- 2005-2006 Trip Limits for Open Access Gears South of 40°10' N. Lat.

Other Limits and Requirements Apply -- Read § 660.301 - § 660.390 before using this table

092005

		JAN-FEB	MAR-APR	MAY-JUN	JUL-AUG	SEP-OCT	NOV-DEC
Fish Conservation Area (RCA) ^{5/} :							
40°10' - 34°27' N. lat.		30 fm - 150 fm		20 fm - 150 fm		30 fm - 150 fm	
South of 34°27' N. lat.		60 fm - 150 fm (also applies around islands)					
See § 660.370 and § 660.383 for Additional Gear, Trip Limit, and Conservation Area Requirements and Restrictions. See §§ 660.390-660.394 for Conservation Area Descriptions and Coordinates (including RCAs, YRCA, CCAs, Farallon Islands, and Cordell Banks).							
State trip limits may be more restrictive than federal trip limits, particularly in waters off Oregon and California.							
1	Minor slope rockfish ^{1/} & Darkblotched rockfish						
2	40°10' - 38° N. lat.	Per trip, no more than 25% of weight of the sablefish landed					
3	South of 38° N. lat.	10,000 lb/ 2 months					
4	Splitnose	200 lb/ month					
5	Sablefish						
6	40°10' - 36° N. lat.	300 lb/ day, or 1 landing per week of up to 900 lb, not to exceed 3,600 lb/ 2 months				500 lb/ day, or 1 landing per week of up to 1,500 lb, not to exceed 9,000 lb/ 2 months	
7	South of 36° N. lat.	350 lb/ day, or 1 landing per week of up to 1,050 lb					
8	Thornyheads						
9	40°10' - 34°27' N. lat.	CLOSED					
10	South of 34°27' N. lat.	50 lb/ day, no more than 1,000 lb/ 2 months					
11	Dover sole	3,000 lb/month, no more than 300 lb of which may be species other than Pacific sanddabs. When fishing for "other flatfish," vessels using hook-and-line gear with no more than 12 hooks per line, using hooks no larger than "Number 2" hooks, which measure 11 mm (0.44 inches) point to shank, and up to 1 lb of weight per line are not subject to the RCAs.					
12	Arrowtooth flounder						
13	Petrale sole						
14	English sole						
15	Other flatfish ^{2/}						
16	Whiting	300 lb/ month					
17	Minor shelf rockfish ^{1/} , Shortbelly, Widow & Chilipepper rockfish						
18	40°10' - 34°27' N. lat.	300 lb/ 2 months	CLOSED	200 lb/ 2 months		300 lb/ 2 months	
19	South of 34°27' N. lat.	500 lb/ 2 months		500 lb/ 2 months	750 lb/ 2 months		
20	Bocaccio						
21	40°10' - 34°27' N. lat.	200 lb/ 2 months	CLOSED	100 lb/ 2 months		200 lb/ 2 months	
22	South of 34°27' N. lat.	100 lb/ 2 months		100 lb/ 2 months			
23	Minor nearshore rockfish & Black rockfish						
24	Shallow nearshore	300 lb/ 2 months	CLOSED	500 lb/ 2 months	600 lb/ 2 months	500 lb/ 2 months	300 lb/ 2 months
25	Deeper nearshore						
26	40°10' - 34°27' N. lat.	500 lb/ 2 months	CLOSED	500 lb/ 2 months		400 lb/ 2 months	500 lb/ 2 months
	South of 34°27' N. lat.			600 lb/ 2 months			400 lb/ 2 months
28	California scorpionfish	300 lb/ 2 months	CLOSED	300 lb/ 2 months	400 lb/ 2 months		300 lb/ 2 months
29	Lingcod ^{3/}	CLOSED		300 lb/ month, when nearshore open			CLOSED

TABLE 5 (South)

TABLE 5 (South)

Table 5 (South). Continued

30	Canary rockfish	CLOSED			
31	Yelloweye rockfish	CLOSED			
32	Cowcod	CLOSED			
33	Other Fish ^{4/} & Cabezon	Not limited			
34	PINK SHRIMP NON-GROUNDFISH TRAWL GEAR (not subject to RCAs)				
35	South	Effective April 1 - October 31: Groundfish 500 lb/day, multiplied by the number of days of the trip, not to exceed 1,500 lb/trip. The following sublimits also apply and are counted toward the overall 500 lb/day and 1,500 lb/trip groundfish limits: lingcod 300 lb/ month (minimum 24 inch size limit); sablefish 2,000 lb/ month; canary, thornyheads and yelloweye rockfish are PROHIBITED. All other groundfish species taken are managed under the overall 500 lb/day and 1,500 lb/trip groundfish limits. Landings of these species count toward the per day and per trip groundfish limits and do not have species-specific limits. The amount of groundfish landed may not exceed the amount of pink shrimp landed.			
36	RIDGEBACK PRAWN AND, SOUTH OF 38°57.50' N. LAT., CA HALIBUT AND SEA CUCUMBER NON-GROUNDFISH TRAWL				
37	NON-GROUNDFISH TRAWL Rockfish Conservation Area (RCA) for CA Halibut and Sea Cucumber:				
38	40°10' - 38° N. lat.	75 fm - modified 200 fm ^{7/}	100 fm - 200 fm	100 fm - 150 fm	75 fm - 150 fm
39	38° - 34°27' N. lat.	75 fm - 150 fm	100 fm - 150 fm		
40	South of 34°27' N. lat.	75 fm - 150 fm along the mainland coast; shoreline - 150 fm around islands	100 fm - 150 fm along the mainland coast; shoreline - 150 fm around islands		75 fm - 150 fm along the mainland coast; shoreline - 150 fm around islands
41	NON-GROUNDFISH TRAWL Rockfish Conservation Area (RCA) for Ridgeback Prawn:				
42	40°10' - 38° N. lat.	75 fm - modified 200 fm ^{7/}	100 fm - 200 fm	100 fm - 150 fm	75 fm - 150 fm
43	38° - 34°27' N. lat.	75 fm - 150 fm	100 fm - 150 fm		
44	South of 34°27' N. lat.	100 fm - 150 fm along the mainland coast; shoreline - 150 fm around islands			
45		Groundfish 300 lb/trip. Trip limits in this table also apply and are counted toward the 300 lb groundfish per trip limit. The amount of groundfish landed may not exceed the amount of the target species landed, except that the amount of spiny dogfish landed may exceed the amount of target species landed. Spiny dogfish are limited by the 300 lb/trip overall groundfish limit. The daily trip limits for sablefish coastwide and thornyheads south of Pt. Conception and the overall groundfish "per trip" limit may not be multiplied by the number of days of the trip. Vessels participating in the California halibut fishery south of 38°57'30" N. lat. are allowed to (1) land up to 100 lb/day of groundfish without the ratio requirement, provided that at least one California halibut is landed and (2) land up to 3,000 lb/month of flatfish, no more than 300 lb of which may be species other than Pacific sanddabs, sand sole, starry flounder, rock sole, curlfin sole, or California scorpionfish (California scorpionfish is also subject to the trip limits and closures in line 31).			

TABLE 5 (South) cont

TABLE 5 (South) con't

Table 5 (South). Continued

- 1/ Yellowtail rockfish is included in the trip limits for minor shelf rockfish and POP is included in the trip limits for minor slope rockfish.
 - 2/ "Other flatfish" are defined at § 660.302 and include butter sole, curlfin sole, flathead sole, Pacific sanddab, rex sole, rock sole, sand sole, and starry flounder.
 - 3/ The size limit for lingcod is 24 inches (61 cm) total length.
 - 4/ "Other fish" are defined at § 660.302 and include sharks, skates, ratfish, morids, grenadiers, and kelp greenling.
Pacific cod is included in the trip limits for "other fish."
 - 5/ The Rockfish Conservation Area is a gear and/or sector specific closed area generally described by depth contours but specifically defined by lat/long coordinates set out at § 660.390.
 - 6/ The "modified 200 fm" line is modified to exclude certain petrale sole areas from the RCA.
- To convert pounds to kilograms, divide by 2.20462, the number of pounds in one kilogram.**

Estimated Total Mortality Impacts As a Result of Proposed Inseason Adjustments - September 2005 Council Meeting

9/21/2005 13:23

Fishery	Bocaccio a/	Canary	Cowcod	Dkbl	Lingcod	POP	Widow	Yelloweye
Limited Entry Trawl- Non-whiting b/	50.0	9.5	0.9	136.0	160.8	64.7	5.0	0.3
Limited Entry Trawl- Whiting								
At-sea whiting motherships		4.7		7.6	3.1	1.3	212	0.0
At-sea whiting cat-proc				10.5	0.9	0.6		0.0
Shoreside whiting				4.2	2.3	2.4		0.0
Tribal whiting		2.0		0.0	0.4	1.3	1.9	0.0
Tribal								
Midwater Trawl		1.8		0.0	0.1	0.0	40.0	0.0
Bottom Trawl		0.8		0.0	9.0	0.0	0.0	0.0
Troll		0.5		0.0	1.0	0.0		0.0
Fixed gear		0.3		0.0	15.0	0.0	0.0	2.3
Limited Entry Fixed Gear	13.4	1.2	0.1	1.3	20.0	0.4	0.5	2.9
Open Access: Directed Groundfish	10.6	3.0	0.1	0.2	100.0	0.1	0.1	3.0
Open Access: Incidental Groundfish								
CA Halibut	0.1	0.1		0.0	2.0	0.0		
CA Gillnet c/	0.5			0.0		0.0	0.0	
CA Sheephead c/				0.0		0.0	0.0	0.0
CPS- wetfish c/	0.3							
CPS- squid d/								
Dungeness crab c/	0.0		0.0	0.0	0.5	0.0		
HMS c/		0.0	0.0	0.0				
Pacific Halibut c/	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
Pink shrimp	0.1	0.1	0.0	0.0	0.5	0.0	0.1	0.1
Ridgeback prawn	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Salmon troll	0.2	1.6	0.0	0.0	0.3	0.0	0.3	0.2
Sea Cucumber	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spot Prawn (trap)								
Recreational Groundfish e/								
WA		8.6			206.0			8.5
OR							2.4	
CA	60.0	9.3	0.4		422.0		7.0	3.7
Research: Includes NMFS trawl shelf-slope surveys, the IPHC halibut survey, and expected impacts from SRPs and LOAs.								
	2.0	3.0	0.1	3.8	5.5	3.6	0.9	1.0
Non-EFP Total	137.3	46.5	1.6	163.6	950.4	74.4	270.2	22.1
EFPs f/								
CA: NS FF trawl	10.0	0.1	0.5		20.0			0.5
EFP Subtotal	10.0	0.1	0.5	0.0	20.0	0.0	0.0	0.5
TOTAL	147.3	46.6	2.1	163.6	970.4	74.4	270.2	22.6
2005 OY	307	46.8	4.2	269	2,414	447	285	26
Difference	159.7	0.2	2.1	105.4	1,443.6	372.6	14.8	3.4
comm canary residual g/								
rec canary residual g/								
Percent of OY	48.0%	99.6%	50.0%	60.8%	40.2%	16.6%	94.8%	86.8%
Key	= either not applicable; trace amount (<0.01 mt); or not reported in available data							

a/ South of 40°10' N. lat.

b/ The 8.0 mt harvest guideline of canary rockfish includes a buffer against the uncertainty of predicting impacts using the new selective flatfish trawl gear. The point estimate of canary rockfish impacts is 5.6 mt.

c/ Mortality estimates are not hard numbers; based on the GMT's best professional judgement.

d/ Bycatch amounts by species unavailable, but bocaccio occurred in 0.1% of all port samples and other rockfish in another 0.1% of all port samples (and squid fisheries usually land their whole catch). In 2001, out of 84,000 mt total landings 1 mt was groundfish. This suggests that total bocaccio was caught in trace amounts.

e/ Values for lingcod and yelloweye in California represent specified harvest guidelines.

f/ Values are proposed EFP bycatch caps, not estimates of total mortality. The EFP is terminated inseason if the cap is projected to be attained early.

g/ In June 2004, the Council apportioned the canary residual on a 50/50 basis between the recreational and commercial sectors. When the final regulations were enacted this residual was 1.25 for each sector.

Description of Inseason Scorecard Changes since June 2005 (9/21/2005)

Bocaccio – trawl non-whiting – based on inseason adjustments and co-occurrence ratios of overfished species in the bottom trawl fishery

Canary – trawl non-whiting – based on most current QSM, discard rates, and expectations thru end of year.

- tribal whiting fishery – based on expectation that fishery will be ongoing through 9/23.
- tribal MW – based on 0.8 mt through 9/2 with projection through remainder of the year based on the 2004 bycatch rate of canary associated with yellowtail.
- tribal bottom trawl fishery – based on 0.5 mt through 9/2 and total catch in 2004.
- Pacific halibut fishery – only 1 canary rockfish caught in IPHC survey > 100 fms.
- WA/OR recreational fishery – updated from original HG of 8.5 mt based on projected catch of 6.8 mt in OR and 1.8 mt in WA.

Darkblotched – trawl non-whiting fishery – based on inseason adjustments and co-occurrence ratios of overfished species in the bottom trawl fishery

Lingcod – trawl non-whiting fishery – based on inseason adjustments and co-occurrence ratios of overfished species in the bottom trawl fishery

- Dungeness crab fishery – based on landed catch of 0.18 mt landed catch in CA crab fisheries, expanded to account for northern crab fishing effort. Assumes high mortality of lingcod caught in crab pots.
- Pacific halibut fishery – based on halibut/lingcod ratio in 2004 IPHC survey applied to 2005 halibut catch.

POP – trawl – non whiting fishery – based on inseason adjustments and co-occurrence ratios of overfished species in the bottom trawl fishery

Widow – trawl non-whiting fishery – based on inseason adjustments and co-occurrence ratios of overfished species in the bottom trawl fishery

- trawl whiting fishery – based on adjustment to whiting fishery cap
- tribal whiting fishery – fishery ongoing through 9/23.
- salmon troll fishery – based on landed catch in 2000.
- CA recreational fishery – based on CRFS estimate with small buffer.

Yelloweye – Pacific halibut fishery – no yelloweye caught in the IPHC survey > 100 fms in the last 4 years.

- WA/OR recreational fishery – updated from 6.7 mt HG; based on estimate of 4.0 mt in OR and 4.2 mt in WA + 0.3 mt buffer.

FINAL CONSIDERATION OF INSEASON ADJUSTMENTS, IF NECESSARY

Consideration of inseason adjustments to ongoing groundfish fisheries is a two-step process at this meeting. The Council will meet on Tuesday, September 20, 2005 and consider advisory body and public advice on inseason adjustments under Agenda Item F.1. If the Council elects to make final inseason adjustments under Agenda Item F.1, then the Council task under this Agenda Item is to clarify and/or confirm these decisions. Otherwise, the Council task under this agenda item is to consider advisory body advice and public comment on the status of ongoing fisheries and recommended inseason adjustments prior to adopting final changes as necessary.

Council Action:

- 1. Consider information on the status of ongoing fisheries.**
- 2. Consider and adopt inseason adjustments as necessary.**

Reference Materials: None.

Agenda Order:

- a. Agenda Item Overview
- b. Report of the GMT
- c. Reports and Comments of Advisory Bodies
- d. Public Comment
- e. **Council Action:** If Necessary, Adopt or Confirm Final Inseason Adjustments for the 2005 Groundfish Fishery

John DeVore
Susan Ashcraft

PFMC
08/17/05

PROPOSED PACIFIC FISHERY MANAGEMENT COUNCIL AND NATIONAL MARINE
FISHERIES SERVICE SCHEDULE AND PROCESS FOR DEVELOPING 2007-2008
GROUNDFISH HARVEST SPECIFICATIONS AND MANAGEMENT MEASURES

NOTE: This proposed schedule and work plan assumes preparation of an EIS. Highlighted dates are proposed, but yet to be decided.

- | | |
|----------------------------------|---|
| July 20, 2005 | Council staff develops a draft proposed schedule, process, and work plan for developing 2007-2008 groundfish harvest specifications and management measures. |
| July 28, 2005 | Council staff and NWR staff teleconference to: <ol style="list-style-type: none">1. Discuss and refine a proposed schedule, process, and work plan for developing 2007-2008 groundfish harvest specifications and management measures.2. Decide whether to recommend an EA or EIS. |
| September 9, 2005 | Council staff files NOI in the Federal Register to prepare an EA or EIS. |
| August 29 -
September 2, 2005 | The Groundfish Management Team (GMT), Council staff, and NWR staff meet in Portland, Oregon to draft a recommended schedule, process, and work plan for developing 2007-2008 groundfish harvest specifications and management measures. |
| September 19-23,
2005 | The Council and advisory bodies meet in Portland, Oregon to adopt: <ol style="list-style-type: none">1. New stock assessments.2. A schedule, process, and work plan for developing 2007-2008 groundfish harvest specifications and management measures.3. Rebuilding revision rules. |
| October 11-14, 2005 | The GMT, Council staff, and NWR staff meet in Seattle, Washington to review new stock assessments and rebuilding analyses and draft a recommended range of 2007-2008 groundfish harvest specifications and preliminary management measures. |
| October 31 -
November 4, 2005 | The Council and advisory bodies meet in San Diego, California to adopt: <ol style="list-style-type: none">1. New stock assessments and rebuilding analyses.2. Updated observer data and proposed methodologies to model bycatch in trawl and fixed gear fisheries.3. A range of 2007-2008 harvest specifications and preferred OYs.4. Adopt, or give guidance on, a preliminary range of management measures, including initial allocations. |

November 7, 2005- January 10, 2006	The GMT, Council staff, NWR staff, and agency staff develop: 1. Impact analyses of proposed management measure alternatives. 2. A preliminary DEIS.
November 14-15, 2005	The Allocation Committee meets to decide commercial-recreational allocation alternatives not decided at the November Council meeting.
November 16- December 31, 2005	State and tribal agencies hold constituent meetings to obtain input on recommendations for final management measures.
January 9-10, 2005	The GMT, Council staff, and NWR staff meet to further develop impact analyses of adopted management measure alternatives and/or those management measure alternatives recommended by the states and tribes.
January 11-13, 2006	The Allocation Committee, GMT, Council staff, and NWR staff meet to refine management measure alternatives and further develop impact analyses.
February, 2006	Whiting Stock Assessment Review (STAR) Panel meets to review a new whiting assessment.
March 6-10, 2006	Council and advisory bodies meet to: 1. Refine management measure alternatives for further analysis. 2. Adopt whiting harvest specifications and management measures for 2006.
March 15, 2006	Council staff or NWR staff releases alternatives analysis (and other key components of the preliminary DEIS) for April briefing book.
April 3-7, 2006	Council and advisory bodies meet to: 1. Adopt final 2007-2008 harvest specifications. 2. Adopt a preferred alternative of management measures.
April 17-21, 2006	The GMT, Council staff, and NWR staff meet in Portland, Oregon to analyze the preferred alternative of management measures adopted at the April Council meeting and to refine the preliminary DEIS for public review and presentation at the June Council meeting.
May 24, 2006	Council staff or NWR staff delivers the DEIS for the June briefing book and distributes a pre-submission review copy to HQ.
June 11-16, 2006	Council and advisory bodies meet at the Crowne Plaza Hotel in Foster City, California to take final action on the 2007-2008 groundfish management measures.
June 26, 2006	DEIS P&E begins.
July 14, 2006	DEIS sent by Council staff or NWR staff to NMFS HQ.
July 17, 2006	DEIS received by NMFS HQ.

July 20, 2006	NWR sends draft proposed rule package to regional GC.
July 21, 2006	DEIS submitted to EPA.
July 24, 2006	Regional GC returns draft proposed rule package to NWR.
July 28, 2006	EPA publishes NOA, 45-day public comment period on DEIS begins.
July 31, 2006	NWR transmits proposed rule to HQ.
August 30, 2006	Proposed rule is published; 30-day public comment period on proposed rule begins.
September 11, 2006	45-day public comment period on DEIS ends.
September 29, 2006	30-day public comment period on proposed rule ends. FEIS sent to HQ.
October 2, 2006	FEIS received by NMFS HQ. NWR meets with regional GC to plan response to comments on proposed rule.
October 6, 2006	FEIS submitted to EPA.
October 12, 2006	NWR sends final rule package to regional GC.
October 13, 2006	EPA publishes NOA; 30-day cooling off period begins.
October 18, 2006	Regional GC returns final rule package to NWR.
October 30, 2006	NWR transmits final rule package to HQ.
November 12, 2006	30-day cooling off period on FEIS ends.
November 13, 2006	ROD signed no earlier than this date.
November 29, 2006	Final rule published; 30-day APA cooling off period begins.
December 29, 2006	APA cooling off period ends.
January 1, 2007	Groundfish fishery begins under adopted specifications and management measures.

PACIFIC FISHERY MANAGEMENT COUNCIL AND NATIONAL MARINE FISHERIES
SERVICE SCHEDULE AND PROCESS FOR DEVELOPING 2007-2008 GROUND FISH
HARVEST SPECIFICATIONS AND MANAGEMENT MEASURES¹

September 9, 2005	Council staff files Notice of Intent (NOI) in the <i>Federal Register</i> to prepare either an Environmental Assessment (EA) or Environmental Impact Statement (EIS).
August 29 - September 2, 2005	The Groundfish Management Team (GMT), Council staff, and Northwest Region (NWR) staff meet in Portland, Oregon to draft a recommended schedule, process, and work plan for developing 2007-2008 groundfish harvest specifications and management measures.
September 19-23, 2005	The Council and advisory bodies meet in Portland, Oregon to adopt: 1. New stock assessments. 2. A schedule, process, and work plan for developing 2007-2008 groundfish harvest specifications and management measures. 3. Rebuilding revision rules.
October 11-14, 2005	The GMT, Council staff, and NWR staff meet in Seattle, Washington to review new stock assessments and rebuilding analyses and draft a recommended range of 2007-2008 groundfish harvest specifications acceptable biological catch (ABC) and optimum yields (OYs) and preliminary management measures.
October 31 - November 4, 2005	The Council and advisory bodies meet in San Diego, California to adopt: 1. New stock assessments and rebuilding analyses. 2. Updated observer data and proposed methodologies to model bycatch in trawl and fixed gear fisheries. 3. A range of preliminary 2007-2008 harvest specifications (ABCs and OYs), and if possible, preferred OYs for some stocks and complexes. 4. Adopt, or give guidance on, a preliminary range of management measures, including initial allocations.
November 7, 2005- January 10, 2006	The GMT, Council staff, NWR staff, and agency staff develop: 1. Impact analyses of proposed management measure alternatives. 2. A preliminary draft Environmental Impact Statement (DEIS) document.
November 14-15, 2005	The Allocation Committee meets to decide commercial-recreational allocation alternatives not decided at the November Council meeting.

¹ Reflecting Council guidance at the September 2005 meeting.

November 16, 2005-March 31, 2006	Opportunity for state and tribal agencies to hold constituent meetings to obtain input on final ABC and OYs refinement of the range of management measures.
January 9-10, 2006	The GMT, Council staff, and NWR staff meet to further develop impact analyses of management measure alternatives.
Three days TBD during mid-January through early February, 2006	The Allocation Committee, GMT, Council staff, and NWR staff meet to refine management measure alternatives and further develop impact analyses.
February, 2006	Whiting Stock Assessment Review (STAR) Panel meets to review a new whiting assessment.
March 6-10, 2006	Council and advisory bodies meet in Seattle, Washington to adopt whiting harvest specifications and management measures for 2006.
March 15, 2006	Council staff or NWR staff release alternatives analysis (and other key components of a preliminary DEIS document) for April briefing book.
April 3-7, 2006	Council and advisory bodies meet to: 1. Adopt final 2007-2008 harvest specifications (ABC and OYs). 2. Adopt a range of refined management measures and, if possible, a tentative preferred alternative of management measures.
April 17-21, 2006	The GMT, Council staff, and NWR staff meet in Portland, Oregon to analyze the management measures adopted at the April Council meeting and to refine a preliminary DEIS document for public review and presentation at the June Council meeting.
April 21, 2006-June 11, 2005	Opportunity for state and tribal agencies to hold constituent meetings to obtain input on a final preferred alternative of management measures.
May 24, 2006	Council staff or NWR staff delivers the preliminary DEIS document for the June briefing book and distributes a pre-submission review copy to NMFS Headquarters (HQ).
June 11-16, 2006	Council and advisory bodies meet at the Crowne Plaza Hotel in Foster City, California to: 1. Take final action on the 2007-2008 groundfish management measures. 2. Determine National Environmental Policy Act (NEPA) document status as EA or EIS. 3. Discuss January-February, 2007 fishery regulations in the context of EA or EIS decision.

The regulatory process after the final Council decision depends on the category of NEPA regulatory document (EA or EIS) and the degree of completeness of the draft NEPA document in the June briefing book. The following schedule presumes an EIS document, a highly refined analysis at the June briefing book stage that also contains a preferred alternative, and no substantial deviation from that preferred alternative at the June Council meeting. Absent these conditions, an EIS schedule would be delayed one to two months and result in the regulations not being in place until about March 1.

June 26, 2006	DEIS proof and edit begins.
July 14, 2006	DEIS sent by Council staff or NWR staff to NMFS HQ.
July 17, 2006	DEIS received by NMFS HQ.
July 20, 2006	NWR sends draft proposed rule package to regional General Counsel (GC).
July 21, 2006	DEIS submitted to EPA.
July 24, 2006	Regional GC returns draft proposed rule package to NWR.
July 28, 2006	EPA publishes NOA, 45-day public comment period on DEIS begins.
July 31, 2006	NWR transmits proposed rule to HQ.
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November 13, 2006	ROD signed no earlier than this date.
November 29, 2006	Final rule published; 30-day APA cooling off period begins.
December 29, 2006	APA cooling off period ends.
January 1, 2007	Groundfish fishery begins under adopted specifications and management measures.

GROUND FISH ADVISORY SUBPANEL REPORT ON PROCESS AND SCHEDULE FOR
2007-2008 BIENNIAL MANAGEMENT SPECIFICATIONS ADOPTION

The Groundfish Advisory Subpanel (GAP) supports the proposed schedule and process as presented in Agenda Item F.6.a.

The GAP recommends that the Council direct the Allocation Committee to give the highest priority to rebuilding species, especially canary and darkblotched rockfish, as these will most impact management decisions in 2007-2008.

The GAP also recommends that the Allocation Committee invite the GAP chair to its meetings, and include the GAP chair in all of its deliberations.

PPMC
09/21/05

GROUND FISH MANAGEMENT TEAM REPORT ON THE PROCESS AND SCHEDULE FOR 2007-2008 BIENNIAL MANAGEMENT SPECIFICATIONS

The Groundfish Management Team (GMT) spent a considerable amount of time discussing the proposed process and timeline for the 2007-2008 specifications and management process with representatives from the National Marine Fisheries Service (NMFS) and Council staff, based on the assumption that a full Environmental Impact Statement (EIS) would be required. The GMT would appreciate guidance on whether a full EIS would be required, or if an Environmental Assessment (EA) would suffice, to evaluate the effects of alternative 2007-2008 specifications and management measures.

Again, based on the assumption that an EIS would be required, Council staff, working with NMFS, developed a straw proposal for the GMT's and Council's consideration. The original, straw proposal was especially difficult for state fishery managers to meet, given the amount of time needed for state public meetings and constituent input, and the timing of the Allocation Committee meeting (which is after the November Council meeting). However, the process and timeline described in the Council's Operating Procedures, which would accommodate state public processes, is not achievable for a variety of reasons. Therefore, it was apparent that some sort of compromise was needed to reach a workable solution.

Council and NMFS staff reviewed the process, including the amount of time needed to craft environmental and economic analyses of the alternatives for the EIS, and the necessary review periods by NOAA General Counsel, and NMFS headquarters. At the same time, the states reviewed their need to sponsor public meetings to develop specific management measure alternatives, primarily for recreational fisheries, such as seasons, bag limits, time/area closures, and the need for guidance from the Allocation Committee on the commercial/recreational sharing for key overfished species (e.g., canary rockfish).

After much debate, Council staff and the GMT agreed to go with a revised timeline that is presented in the Council's briefing book (Agenda Item F.6.a, Attachment 1). Therefore, the GMT recommends that the Council approve the process and timeline as presented. The GMT would like to stress that this revised timeline is far from ideal and does not represent something that is easily achievable. It will take commitment and dedication on the part of all parties to adhere to the specified deadlines to have a chance of being workable.

The GMT also commits to drafting alternatives for commercial/recreational sharing for key overfished species at its October meeting to present to the Council in November. This will allow for the development of commercial management measures, and for the states to craft the range of recreational management measures. In November, the GMT would recommend that the Council provide the flexibility to the Allocation Committee to work with the GMT and Groundfish Advisory Subpanel in January to finalize the range of management measures with guidance on the sideboards around that range.

In general, with regard to the amount of issues requiring attention at the November Council meeting (see Attachment 1 appended to this report), and the magnitude of specific issues that have been added to the 2007-2008 specifications, the GMT is struggling with the lack of time and Council guidance to thoroughly address some of them, such as sector total catch limits and an acceptable biological catch (ABC) and optimum yield (OY) for spiny dogfish (prior to a formal assessment). The GMT has a meeting in October to prepare for the 2007-2008 specifications process, and would appreciate guidance from the Council to reduce the potential list of issues relative to these two items.

As noted in the GMT's statement on Amendment 18, most of the sectors lack adequate monitoring programs to accurately determine achievement of sector catch limits in a timely manner. However, if the Council would like to consider total catch limits, harvest guidelines, or harvest targets for 2007 and 2008, then the GMT would appreciate Council guidance to identify the sectors and species for consideration.

To determine an ABC and OY for spiny dogfish, the GMT would need to determine the amount of the "Other Fish" ABC and OY that was originally attributed to dogfish and subtract that amount. Then, the GMT would need to review historical catch data for all fisheries, including recreational, to determine the appropriate ABC and OY for dogfish, and notes that dogfish catch data for many of these fisheries are not available. And, according to the fishery management plan (FMP), for unassessed species, the Council would need to take a precautionary reduction of 50% of those historical catch levels to set the ABC and OY. As such, the resulting amounts may be set too low, and the OY may be artificially constraining to current commercial and recreational fisheries. On the other hand, if the Council chose to include a "buffer" against that uncertainty, then the resulting amounts may be set too high, which would compromise the integrity of the precautionary reduction. One way to approach this may be to apply management measures (i.e., trip limits) for spiny dogfish in 2007-2008, and then set an ABC and OY for dogfish beginning in 2009, after a stock assessment has been completed and approved in 2007.

The GMT also proposes that, as a check-in, we update the Council in March 2006 on the results of the 2005 groundfish fisheries, including total catch estimates and an evaluation of the effects of inseason measures. This review will provide an additional opportunity for Council guidance on the management measure alternatives for 2007-2008.

The GMT would like to express its appreciation to Council and NMFS staff for the productive discussion that led to as near a workable solution as possible. However, the GMT would advocate that the 2007 stock assessment process be scheduled in a manner which would allow for preliminary consideration of specifications (i.e., ABCs and OYs) for key species in September 2007. The GMT would also like to develop a timeline with Council and NMFS staff for the 2009-2010 process, prior to April 2007, which would better meet the needs of everyone assuming that an EIS would be required.

GMT Recommendations:

1. Provide guidance on the National Environmental Policy Act process and document needed for the 2007-2008 specifications and management measures (i.e., EIS vs. EA).
2. Adopt the process and schedule as presented to the Council, with an additional check-in at the March Council meeting on the results of the 2005 groundfish fisheries.
3. Provide guidance on the sector total catch limits, harvest guidelines, and/or harvest targets (i.e., identification of sectors and species).
4. Set an ABC and OY for spiny dogfish following approval of a formal assessment in 2007, to apply in 2009.
5. Provide guidance to NMFS to structure the 2007 stock assessment process to allow for preliminary considerations of specifications for key species in September 2007.

PROCESS AND SCHEDULE FOR 2007-2008 BIENNIAL MANAGEMENT SPECIFICATIONS ADOPTION

Amendment 17 to the Groundfish Fishery Management Plan (FMP) established a new process to set biennial groundfish harvest specifications and management measures which was first used to set 2005-2006 harvest specifications and management measures. The process accommodated several important sequential decision-making steps, including scientific peer review of data and analyses used for management decision-making; an environmental assessment compliant with the National Environmental Policy Act (NEPA) to analyze alternative harvest specifications and management measures; constituent meetings sponsored by state agencies and the Council process to solicit public input on a preferred management alternative; and formal rulemaking to implement new biennial regulations. All of these steps were timed to implement new rules by January 1, 2005, the beginning of the first biennial management period.

Experience from the initial process has led to new policies and recommendations to avoid some of the problems associated with setting 2005-2006 harvest specifications and management measures. For instance, new at-sea observer data came late into the process which delayed some of the NEPA analysis used by the Council and state managers to decide new management measures. This, coupled with delayed resolution of new stock assessments, ultimately delayed the entire process. The National Marine Fisheries Service (NMFS) had to waive the Administrative Procedure Act required 30-day cooling-off period in order to implement new regulations by January 1. The Council and NMFS have made improvements by agreeing to only provide new observer data annually in November when the Council decision-making process begins and scheduling extra Stock Assessment Review Panels to resolve stock assessment problems that emerge late in the process. However, despite these improvements, the 2007-2008 decision-making process will be challenging and depends on a commitment from all entities to complete their steps in time.

The complexity of the groundfish fishery and the potentially significant impacts associated with 2007-2008 management decision-making appears to require the preparation of an Environmental Impact Statement (EIS). Under this assumption, the proposed Council and NMFS schedule and process for developing 2007-2008 groundfish harvest specifications and management measures is provided in Agenda Item F.6.a, Attachment 1. One significant change from the schedule adopted to set 2005-2006 harvest specifications and management measures is the need to adopt the preferred alternative of management measures at the April 2006 Council meeting. This is due to the need to submit a draft EIS (DEIS) a month earlier than last time on the advice that the 30-day cooling-off period cannot be waived. Delaying this decision until the June 2006 Council meeting does not leave adequate time to analyze a preferred alternative of management measures and meet the deadline for submitting a DEIS. Therefore, a DEIS with complete analyses must be prepared in advance of the April 2006 Council meeting.

The Council should consider the advice of its advisory bodies and the public before adopting a detailed schedule and process for the development of 2007-2008 groundfish harvest specifications and management measures.

Council Action:

Adopt the Process and Schedule for Consideration of 2007-2008 Groundfish Fishery Management Specifications.

Reference Materials:

1. Agenda Item F.6.a, Attachment 1: Proposed Pacific Fishery Management Council and National Marine Fisheries Service Schedule and Process for Developing 2007-2008 Groundfish Harvest Specifications and Management Measures.

Agenda Order:

- a. Agenda Item Overview
 - b. Reports and Comments of Advisory Bodies
 - c. Public Comment
 - d. **Council Action:** Adopt the Process and Schedule for Consideration of 2007-2008 Groundfish Fishery Management Specifications
- John DeVore

PFMC
08/31/05

Rebuilding Runs Requested for Species Currently Managed Under Rebuilding Plans **July 12, 2005**

During recent weeks, there has been considerable dialogue regarding the most appropriate measures for evaluating the adequacy of rebuilding progress for species that are currently managed under rebuilding plans. A conference call was held last Friday (including participants from the NW Center, NW Region, Council staff, and the SSC) to discuss the uncertainties that have emerged since the June Council meeting. Following that call, an effort was made to identify a set of rebuilding runs which would allow authors to complete the analytical work that may be required by the Council (and advisors) and NMFS to evaluate rebuilding adequacy later this year. These runs are described in the table below. We are hopeful that there will be no need for any additional runs by authors who complete these six. Authors should be sure to address A) - C) below before proceeding to D).

- A. Convert the current F to an SPR (this can be achieved straightforwardly given the biological parameters – reported in the rebuilding analysis).
- B. Define how B_0 is to be calculated for the current rebuilding analysis (from the assessment; based on average recruitment over the early years, etc.)
- C. Define how future recruitment is to be generated.
- D. Do the following analyses. Report, T_{MIN} , T_{MAX} , T_{TARGET} , SPR/ F , Probability of recovery by T_{MAX} , probability of recovery by T_{TARGET} .

For runs #1 and 2, the existing T_{TARGET} should be substituted for T_{MAX} in Puntalyzer setup. Run #1 will provide the likelihood of achieving T_{TARGET} with the current SPR, which can then be compared to the 50% likelihood estimated originally. Run #2 provides the SPR that restores a 50% likelihood of rebuilding by T_{TARGET} . Similarly, run #3 estimates the likelihood of rebuilding by the existing T_{MAX} with the current SPR, and run #4 estimates the SPR that would be required to restore a P_0 likelihood of rebuilding in T_{MAX} . Runs #5 and 6 provide comparable outputs relative to the “new” T_{MAX} , as calculated using outputs from 2005 assessments.

Run #	Prob (recovery)	By	Based on
#1 (default)	Estimated	Current T_{TARGET}	Current SPR
#2 (T_{TARGET} with 50% prob)	0.5	Current T_{TARGET}	Estimated SPR
#3 (#1 based on T_{MAX})	Estimated	Current T_{MAX}	Current SPR
#4 (#2 based on T_{MAX})	P_0	Current T_{MAX}	Estimated SPR
#5 (#3 with re-estimated T_{MAX})	Estimated	T_{MAX} (re-estimated)	Current SPR
#6 (#4 with re-estimated T_{MAX})	P_0	T_{MAX} (re-estimated)	Estimated SPR

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON REBUILDING PLAN REVISION POLICY

At the June meeting, the Scientific and Statistical Committee (SSC) prepared a detailed statement that described an approach to assessing adequacy of progress of overfished groundfish stocks towards attaining their rebuilding targets. The SSC also evaluated a set of decision rules that could lead to revisions of rebuilding plans, should progress be deemed inadequate. The approach was developed and studied using a computer simulation technique termed a management strategy evaluation (MSE). Although the Council directed the SSC to continue its evaluation of revision rules, subsequent advice from Council staff indicated that the approach was inconsistent with language in Amendment 16-1 to the groundfish FMP. Hence, work on the MSE was stopped and, instead, a list of rebuilding “runs” was developed that could be used by the Council to assess rebuilding progress and to provide some guidance on what changes might be required to rebuilding plans (see Agenda Item F.7.a, Attachment 1). Effectively, this will allow the Council to treat each overfished stock individually.

The SSC discussed the list of runs that are outlined in Attachment 1 and concluded that results from such an analysis should provide the essential information the Council will need to evaluate rebuilding progress and to implement revisions to rebuilding plans, should progress be lagging. In particular, Run #5 is viewed as critical for framing a set of alternatives that could bracket a range of policies. Specifically, there are two possible outcomes of Run #5 that could guide Council decision-making. First, if Run #5 shows that the probability of rebuilding by $T_{\max}$ at the current SPR is greater than the original probability value selected by the Council (P_0), thus in order to be consistent with proposed NS1 guidelines, the existing exploitation rate should be maintained in order to rebuild the stock as soon as practical. Second, if Run #5 indicates that the probability of rebuilding by $T_{\max}$ at the current SPR is less than 0.50, then the Council may elect to lower the exploitation rate (i.e., increase SPR) to insure that rebuilding is more likely than not.

Some additional recommendations are:

- $T_{\min}$, mean generation time, and $T_{\max}$ should be re-calculated routinely using new information obtained from updated stock assessments and their values compared with existing estimates.
- Both the rebuilding exploitation rate and spawning potential per recruit (SPR) should be reported in rebuilding analyses.
- An additional rebuilding run should be conducted that maintains the same OY values as provided in the existing rebuilding analysis.
- If an analyst opts to use a different method of projecting stock rebuilding the effect of the change should be fully evaluated and described.

GROUND FISH ADVISORY SUBPANEL REPORT ON
REBUILDING PLAN REVISION POLICY

The Groundfish Management Team (GMT) report on harvest strategies for rebuilding stocks was presented by Mr. John Devore, Council staff, and Dr. John Fields, GMT. The Groundfish Advisory Subpanel (GAP) considered information from the report on alternatives on rebuilding plan revision policies. The GAP supports Alternative 5 with some flexibility to evaluate each stock situation on a case-by-case basis. The GAP considered and rejected Alternative 4 because it would likely result in more variability in the harvest policy, as compared to Alternative 5.

The GAP supports the last paragraph in the GMT report referencing that these alternatives are simply examples of plausible evaluation criteria, and variations of alternatives may be preferable to the Council. Moreover, adoption of a given alternative as a preferred strategy should not be construed as constraining Council flexibility, as Amendment 16.1 of the groundfish fishery management plan clearly states that the Council retains the ability to evaluate rebuilding plans on a case by case basis.

PFGMC
09/22/05

GROUND FISH MANAGEMENT TEAM REPORT ON REBUILDING PLAN REVISION POLICY

In November, the Council will be presented with updated rebuilding analyses for eight overfished stocks. The Groundfish Management Team (GMT) and other advisory bodies have suggested that it would be beneficial to have a stated policy for evaluating rebuilding progress on these stocks prior to the November meeting.

As discussed in the situation summary, the options recommended by the GMT, Groundfish Advisory Subpanel (GAP) and others at the June meeting were relative to different reference points than those that were established in the fishery management plan (FMP) (P_0 , the initially chosen probability of rebuilding by T_{MAX} , as opposed to T_{TARGET} , the year in which the probability of rebuilding was equal to 50%). Consequently, the Management Strategy Evaluation (MSE) recommended in the June meeting was not conducted, and we do not have new quantitative simulation results on the expected performance of different policy options.

Despite this, the initial round of simulations conducted by the Scientific and Statistical Committee (SSC) (Agenda Item C.6.a, Attachment 3, June 2005) have provided the Council community with some understanding of the trade-offs between alternative policies for responding to new information on rebuilding stocks. Based on the general guidance from the Council and advisory bodies at the June meeting, and a preliminary understanding of the recent proposed changes to the National Standard 1 Guidelines, the GMT offers a range of potential strategies for evaluating progress that we consider to be consistent with the objectives of maintaining both management stability and steady progress towards rebuilding depleted stocks.

Alternative 1: *Revise harvest rates upon completion of updated rebuilding analyses to maintain exactly a 50% probability of recovery by T_{TARGET} . The possibility exists that there would be no harvest rate that would allow a 50% probability of rebuilding by T_{TARGET} , as fixed in the FMP, but there could be a harvest rate that allows for a 50% probability of rebuilding by T_{MAX} , the legal standard. In such a scenario, the Council would be faced with a decision of either adopting a harvest rate that would allow for no less than a 50% probability of rebuilding by T_{MAX} , or revising the rebuilding plan. If there is no feasible fishing mortality rate that would allow a 50% probability of rebuilding by T_{MAX} , even after accounting for any potential past overages, then there is no alternative but to revise the rebuilding plan. This would be comparable to resetting harvest rates to achieve the initial probability (P_0), of recovery by T_{MAX} that was the basis for determining T_{TARGET} in the FMP. Although this is a viable option, the analyses that have been done suggest that this policy is overly responsive to environmental and statistical noise, is inconsistent with maintaining management stability, and would likely lead to longer rebuilding times.*

Alternative 2: *If the probability of recovery by T_{TARGET} is 50% or greater, maintain the current harvest rate. If the probability of recovery by T_{TARGET} is less than 50%, lower the harvest rate to achieve a 50% probability of rebuilding by T_{TARGET} . If there is no feasible fishing mortality rate that would allow a 50% probability of rebuilding by T_{TARGET} , act in accordance with Alternative 1. This alternative maintains a probability of rebuilding that is no less than that chosen in the FMP. This alternative is also consistent with the proposed National Standard 1 Guidelines for*

“banking” good performance in rebuilding plans to rebuild faster, and for avoiding any extension of rebuilding plans unless the best available estimates of stock productivity change substantially.

Alternative 3: *If the probability of recovery by T_{TARGET} is 45% or greater, but the probability of rebuilding by T_{MAX} is still greater than 50%, maintain the current harvest rate. If the probability of recovery by T_{TARGET} is less than 45%, lower the harvest rate to achieve a 50% probability of rebuilding by T_{TARGET} . If there is no feasible fishing mortality rate that would allow a 50% probability of rebuilding by T_{TARGET} , act in accordance with Alternative 1. This alternative would establish a buffer of five percent around the probability of rebuilding by T_{TARGET} so long as the probability of rebuilding by T_{MAX} was greater than 50% (the legal precedent) in order to avoid making frequent changes to harvest rates. The intent of a buffer would be to allow for small movements around the target rebuilding year that are likely to result from recruitment variability and estimation uncertainty. As with Alternative 2, this would “bank” good performance in order to rebuild as fast as possible. The Council could also reserve the ability to reduce a harvest rate if sequential assessments indicated that the probability of recovery by T_{TARGET} was less than 50%.*

Alternative 4: *If the probability of recovery by T_{TARGET} is greater than 55%, then on a case-specific basis, consider liberalizing harvest rates to a degree consistent with half of the difference between 55% probability of achieving T_{TARGET} and the most recently estimated probability of achieving T_{TARGET} . If the probability of recovery by T_{TARGET} was less than 45%, act in accordance with Alternative 1. The GMT recognizes that where stocks are rebuilding faster than expected, the Council may wish to consider increasing the harvest rate in order to reduce the constraints on fisheries for co-occurring healthy stocks. This strategy would balance any such liberalization by banking no less than half of any improvement in rebuilding performance. Although recent court decisions and the proposed National Standard 1 Guidelines suggest a de-facto policy of maintaining target harvest rates in order to accelerate the rebuilding process is preferable, there is also a recognized commitment to avoid unduly constraining fishery opportunities.*

Alternative 5: *If the probability of recovery by T_{TARGET} is greater than 55%, and the corresponding P_{MAX} (probability of rebuilding by most recent estimate of T_{MAX}) is greater than 80%, then on a case-specific basis, consider liberalizing harvest rates to maintain a probability consistent with a P_{MAX} of 80%. If the probability of recovery by T_{TARGET} was less than 45%, act in accordance with Alternative 1. The strategy of establishing and maintaining a P_{MAX} of 0.8 was identified through simulations as a strategy that led to generally the shortest rebuilding times, and the most infrequent needs to redefine harvest rates or rebuilding plans. This strategy would be intended to “bank” all improved rebuilding performance towards a P_{MAX} of 0.8 before liberalization of harvest rates was considered. As such, this option is consistent with Sustainable Fisheries Act of 1996 interpretation and National Standard 1 proposed revisions to rebuild as soon as possible, yet does not preclude the possibility of increasing harvest rates when performance is well above what is expected. (Note: Although a new P_{MAX} and T_{MAX} result from each new analysis, our intent here is relative to the original P_{MAX} from which T_{TARGET} was derived).*

Regardless of the strategy chosen, the GMT would recommend suspending revision rules when a stock approaches T_{TARGET} (within five years of T_{TARGET} , or 10% of the total expected rebuilding time, whichever is greater). This is consistent with simulation results reviewed by the SSC that

suggest that trying to fine-tune harvest rates in the waning years of a rebuilding plan would not be likely to actually improve rebuilding performance, again due to small scale variations in recruitment and estimation uncertainty.

Figure 1 (attached) provides a simple decision-tree schematic of these five alternatives. In our discussions, the GMT has identified Alternative 5 as that which minimizes the need to make fine-scale adjustments in harvest rates and management measures, maintains the overarching objective of rebuilding stocks in as short a time period as is feasible, and concurrently allows for a reasonable degree of flexibility in liberalizing harvest rates when rebuilding is proceeding considerably faster than expected. The Council may also wish to seek further SSC guidance on the extent to which given alternatives might be qualitatively described with respect to risk of achieving rebuilding objectives. Additionally, the Council may also wish to receive guidance from Legal Counsel on the extent to which a given alternative is consistent with both existing and newly proposed National Standard 1 Guidelines and court precedent.

The GMT recognizes that there are a large number of plausible scenarios that could arise as a result of adoption of decision rules for evaluating rebuilding progress. For example, an optimistic analysis may suggest faster than expected rebuilding, such that some liberalization of harvest rates was implemented, but subsequent analyses suggest slower than expected rebuilding. Although we note that some logical minimum performance standards (attain no less than 50% probability by the original T_{TARGET}) would be reasonable, in general an appropriate course of action would need to be determined on a case-specific basis.

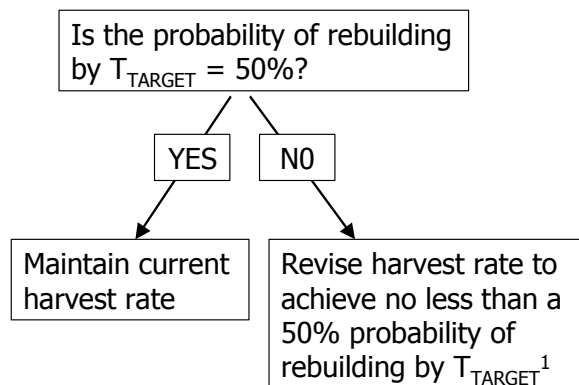
In closing, the GMT would like to clarify that the above alternatives are examples of plausible evaluation criteria, and variations on these alternatives may be preferable to the Council. Moreover, adoption of a given alternative as a preferred strategy should not be construed as constraining Council flexibility, as Amendment 16.1 of the Groundfish FMP clearly states that the Council retains the ability to evaluate rebuilding plans on a case-specific basis. Such flexibility could include reducing harvest rates to achieve higher probabilities of rebuilding by either T_{TARGET} or T_{MAX} , as well as liberalizing harvest rates for highly constraining species, so long as such exceptions maintained a probability of T_{TARGET} of no less than 50%.

GMT Recommendations

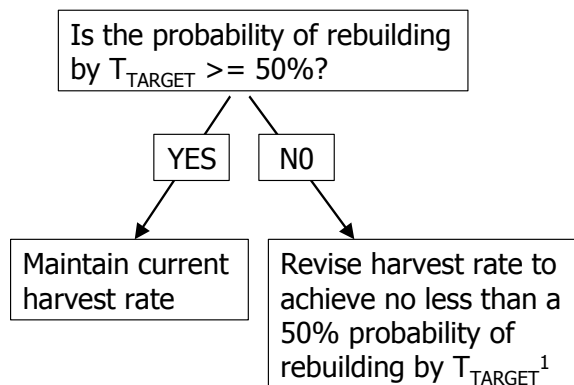
1. Adopt Alternative 5 as a stated policy for responding to new rebuilding analyses, while maintaining the flexibility to consider alternative rebuilding strategies on a case-specific basis.
2. Adopt a policy that would suspend revision rules when a stock approaches T_{TARGET} (within five years of T_{TARGET} , or 10% of the total expected rebuilding time, whichever is greater) to avoid chasing noise in recruitment or estimation uncertainty near the end of the rebuilding period.

PFMC
09/22/05

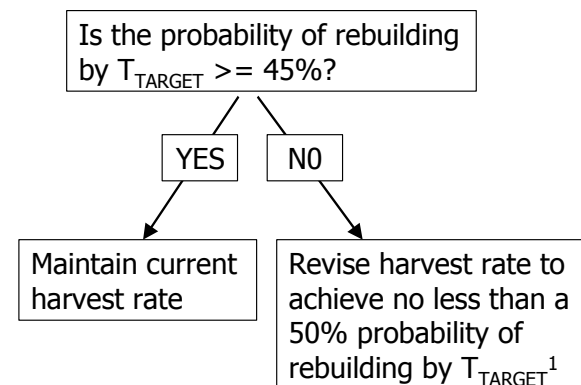
Alternative 1



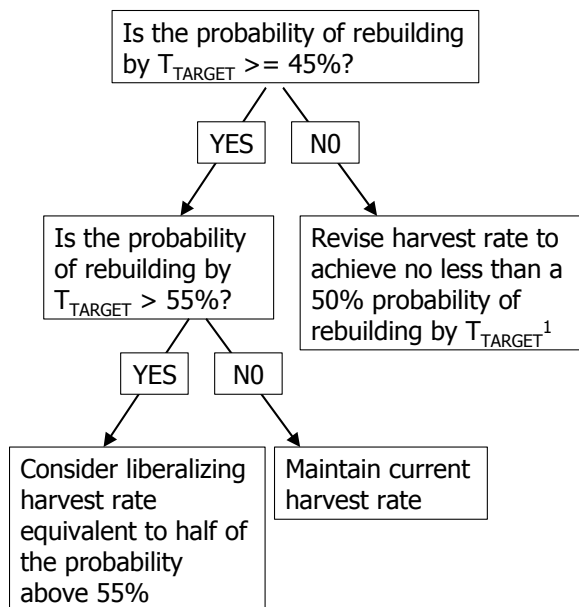
Alternative 2



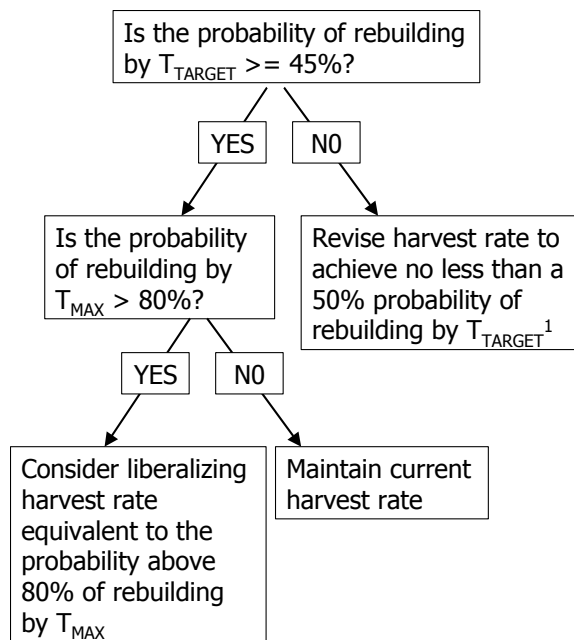
Alternative 3



Alternative 4



Alternative 5



¹ If there exists no harvest rate that would allow a 50% probability of rebuilding by T_{TARGET} , but there exists a harvest rate that allows at least a 50% probability of rebuilding by T_{MAX} , the Council must decide whether to adopt a harvest rate that would allow for no less than a 50% probability of rebuilding by T_{MAX} , or revise the rebuilding plan. If there exists no harvest rate that would maintain at least a 50% probability of rebuilding by T_{MAX} , revise FMP to establish new T_{TARGET} .

REBUILDING PLAN REVISION POLICY

The Council is expected to evaluate rebuilding plan progress for each of the eight overfished groundfish stocks this November, when new rebuilding analyses will be available, and modify management measures, if needed. At the June meeting, the Council decided to explore alternative rebuilding revision rules that would trigger automatic actions based on whether the probability of recovery by the maximum allowable time (T_{MAX}) corresponding to the current level of fishing mortality ($P_{CURRENT}$) is less than or greater than P_0 (the probability of recovery selected when the rebuilding plan was originally established). Such automatic actions could include revisions to the specified harvest rate to achieve the target rebuilding probability (with all else being equal, harvest rates are reduced to increase rebuilding probabilities), or re-specifying the target rebuilding year if a new assessment and rebuilding analysis indicates rebuilding objectives cannot be attained by T_{MAX} . The latter course of action requires an amendment to the rebuilding plan (and hence the fishery management plan [FMP]).

In June, the Council adopted eight alternative rebuilding revision rules recommended by the Groundfish Management Team, the Groundfish Advisory Subpanel, and The Ocean Conservancy for analysis and further consideration. The Council's Scientific and Statistical Committee (SSC) identified a process they termed a Management Strategy Evaluation (MSE) to evaluate the implications of each alternative in terms of the expected frequency of rebuilding plan revisions, which contributes to future fishery stability, vs. the specified optimum yields (OYs) during the course of rebuilding.

All of the alternatives established by the Council were based on the probability of recovery by T_{MAX} . In contrast, the FMP is based on the "target" year for rebuilding (T_{TARGET}); i.e. the year in which the probability of recovery is 50%. None of the alternatives established by the Council are framed in terms of T_{TARGET} and there is no guarantee that a set of rules based on T_{MAX} will lead to exactly the same policy trade-offs as rules based on T_{TARGET} . Therefore, it was decided not to continue the analyses of the current options. Some generic results of the initial work presented to the SSC indicate that modifying rebuilding plans is needed as additional information is received. However, modifying management measures each time a rebuilding plan is reviewed so that the probability of recovery by T_{MAX} is P_0 (or T_{TARGET} has a 50% rebuilding probability) will lead to very frequent changes in OYs but little benefit in terms of the overall probability of recovery. The proposed rule for modifying the National Standard 1 Guidelines (http://www.nmfs.noaa.gov/mediacenter/docs/NSG1_Proposed_Rule.pdf) recommends if the rate of rebuilding is proceeding faster than projected, then the F target rates should be maintained in order to rebuild the stock in as short a time as possible. Conversely, if the existing rebuilding $F_{TARGETS}$ have been exceeded, the proposed rule recommends, future $F_{TARGETS}$ must be reduced to the extent necessary to compensate for previous overruns (years when F_{TARGET} was exceeded), before the former T_{TARGET} can be altered.

In order to ensure upcoming rebuilding analyses contain sufficient results to evaluate the adequacy of rebuilding, the NMFS Northwest Fishery Science Center sent assessment authors a memorandum requesting specific runs in their analyses (Agenda Item F.7.a, Attachment 1).

These runs, which can be conducted using the rebuilding software endorsed by the SSC, should allow the evaluation of rebuilding progress anticipated by the Council.

The Council task at this meeting is to consider the advice of its advisory bodies, the public, and the proposed rule for modifying the National Standard 1 Guidelines before adopting final rebuilding revision rules or policy.

Council Action: Adopt a Final Policy for Revising An Adopted Rebuilding Plan.

Reference Materials:

1. Agenda Item F.7.a, Attachment 1: Rebuilding Runs Requested for Species Currently Managed Under Rebuilding Plans.

Agenda Order:

- a. Agenda Item Overview
- b. Scientific and Statistical Committee (SSC) Report
- c. Reports and Comments of Advisory Bodies
- d. Public Comment
- e. **Council Action:** Adopt Final Policy

John DeVore
Kevin Hill

PFMC
09/02/05

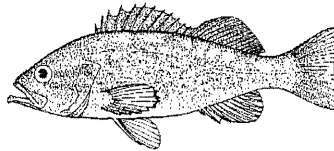
DRAFT

Addendum to

Status of the Yellowtail Rockfish in 2004

John Wallace
Han-Lin Lai

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August 31, 2005

Version: Post STAR

Executive Summary

Decision Table: To bracket the uncertainty in this assessment the Executive Summary Table 2 shows three future spawning biomass states-of-nature and three catch scenarios projected over 12 years. The 'status quo' fixes the fishing mortality rate that closely matches the 2005 catch to what was seen in 2004.

Executive Summary Table 2. South Vancouver area. Decision table for three future spawning biomass states-of-nature and three catch scenarios. The 'status quo' fixes the fishing mortality rate that closely matches the 2005 catch to what was seen in 2004.

Decision Table South Vancouver				Low state (less likely)		Middle state (more likely)		High state (less likely)	
	Year	Catch	Landings	Sp. Bio	Depletion	Sp. Bio	Depletion	Sp. Bio	Depletion
Status Quo (F67%)	2005	1,611	1,353	7,430	0.822	9,251	1.024	11,520	1.275
	2006	1,592	1,337	7,229	0.824	8,979	1.023	11,152	1.271
	2007	1,598	1,342	7,167	0.856	8,911	1.065	11,080	1.324
	2008	1,615	1,357	7,180	0.911	8,963	1.137	11,188	1.419
	2009	1,637	1,375	7,238	0.941	9,076	1.179	11,379	1.479
	2010	1,663	1,397	7,349	0.958	9,231	1.203	11,595	1.511
	2011	1,690	1,420	7,525	0.990	9,408	1.237	11,762	1.547
	2012	1,714	1,440	7,743	1.004	9,578	1.243	11,849	1.537
	2013	1,733	1,456	7,953	1.023	9,728	1.252	11,898	1.531
	2014	1,749	1,469	8,126	1.018	9,851	1.234	11,942	1.496
	2015	1,762	1,480	8,259	1.045	9,951	1.259	11,991	1.517
	2016	1,772	1,489	8,355	1.090	10,030	1.308	12,041	1.571
F50% Moderate Catch (F50%)	2005	2,996	2,517	7,430	1.004	9,251	1.250	11,520	1.556
	2006	2,798	2,350	6,800	0.966	8,456	1.201	10,515	1.494
	2007	2,677	2,249	6,396	0.996	7,983	1.243	9,964	1.552
	2008	2,604	2,187	6,137	1.049	7,714	1.319	9,696	1.657
	2009	2,560	2,150	5,980	1.046	7,571	1.324	9,585	1.676
	2010	2,541	2,134	5,925	0.910	7,524	1.155	9,555	1.467
	2011	2,535	2,130	5,971	0.801	7,537	1.012	9,515	1.277
	2012	2,534	2,129	6,077	0.750	7,574	0.935	9,441	1.165
	2013	2,534	2,128	6,184	0.707	7,615	0.871	9,376	1.072
	2014	2,534	2,128	6,265	0.738	7,651	0.901	9,342	1.100
	2015	2,534	2,128	6,320	0.769	7,680	0.935	9,333	1.136
	2016	2,533	2,128	6,355	0.758	7,704	0.919	9,339	1.114
High Catch (F45%)	2005	3,544	2,977	7,430	0.931	9,251	1.160	11,520	1.444
	2006	3,234	2,716	6,629	0.868	8,250	1.080	10,266	1.344
	2007	3,036	2,550	6,103	0.761	7,634	0.951	9,549	1.190
	2008	2,909	2,443	5,755	0.731	7,262	0.923	9,163	1.164
	2009	2,829	2,376	5,537	0.664	7,046	0.844	8,966	1.074
	2010	2,785	2,340	5,439	0.647	6,946	0.826	8,871	1.055
	2011	2,764	2,322	5,456	0.601	6,921	0.762	8,780	0.967
	2012	2,751	2,311	5,536	0.585	6,928	0.732	8,670	0.916
	2013	2,743	2,304	5,619	0.568	6,945	0.702	8,584	0.867
	2014	2,736	2,298	5,679	0.581	6,963	0.713	8,539	0.874
	2015	2,732	2,295	5,716	0.663	6,979	0.810	8,522	0.989
	2016	2,728	2,292	5,738	0.607	6,992	0.740	8,520	0.902

Executive Summary Table 2. (cont.) North Columbia area. Decision table for three future spawning biomass states-of-nature and three catch scenarios. The 'status quo' fixes the fishing mortality rate that closely matches the 2005 catch to what was seen in 2004.

Decision Table North Columbia				Low state (less likely)		Middle state (more likely)		High state (less likely)	
	Year	Catch	Landings	Sp. Bio	Depletion	Sp. Bio	Depletion	Sp. Bio	Depletion
Status Quo (F94%)	2005	112	94	4,946	0.378	5,962	0.455	7,186	0.549
	2006	115	97	4,984	0.380	5,997	0.458	7,217	0.551
	2007	121	102	5,084	0.388	6,118	0.467	7,363	0.562
	2008	129	108	5,256	0.401	6,340	0.484	7,647	0.584
	2009	137	115	5,493	0.419	6,655	0.508	8,063	0.615
	2010	146	123	5,787	0.442	7,043	0.538	8,571	0.654
	2011	154	130	6,127	0.468	7,466	0.570	9,097	0.694
	2012	162	136	6,495	0.496	7,888	0.602	9,581	0.731
	2013	169	142	6,862	0.524	8,289	0.633	10,012	0.764
	2014	175	147	7,205	0.550	8,655	0.661	10,396	0.794
	2015	180	151	7,513	0.573	8,982	0.686	10,738	0.820
	2016	184	155	7,785	0.594	9,273	0.708	11,045	0.843
F50% Moderate Catch (F50%)	2005	1,404	1,179	4,946	0.378	5,962	0.455	7,186	0.549
	2006	1,345	1,129	4,562	0.348	5,500	0.420	6,631	0.506
	2007	1,322	1,110	4,289	0.327	5,186	0.396	6,270	0.479
	2008	1,329	1,117	4,126	0.315	5,019	0.383	6,104	0.466
	2009	1,356	1,139	4,058	0.310	4,976	0.380	6,103	0.466
	2010	1,388	1,166	4,068	0.311	5,026	0.384	6,209	0.474
	2011	1,418	1,191	4,142	0.316	5,125	0.391	6,341	0.484
	2012	1,444	1,213	4,252	0.325	5,238	0.400	6,453	0.493
	2013	1,466	1,232	4,368	0.333	5,348	0.408	6,547	0.500
	2014	1,485	1,247	4,472	0.341	5,446	0.416	6,631	0.506
	2015	1,499	1,259	4,558	0.348	5,530	0.422	6,710	0.512
	2016	1,511	1,269	4,627	0.353	5,602	0.428	6,782	0.518
High Catch (F45%)	2005	1,650	1,386	4,946	0.378	5,962	0.455	7,186	0.549
	2006	1,556	1,307	4,482	0.342	5,406	0.413	6,520	0.498
	2007	1,510	1,269	4,145	0.316	5,019	0.383	6,077	0.464
	2008	1,503	1,263	3,930	0.300	4,793	0.366	5,845	0.446
	2009	1,521	1,278	3,820	0.292	4,703	0.359	5,789	0.442
	2010	1,547	1,299	3,796	0.290	4,710	0.360	5,845	0.446
	2011	1,572	1,321	3,840	0.293	4,772	0.364	5,930	0.453
	2012	1,594	1,339	3,922	0.299	4,852	0.370	6,002	0.458
	2013	1,613	1,355	4,011	0.306	4,932	0.376	6,063	0.463
	2014	1,628	1,367	4,090	0.312	5,003	0.382	6,120	0.467
	2015	1,640	1,377	4,155	0.317	5,065	0.387	6,176	0.471
	2016	1,649	1,385	4,205	0.321	5,118	0.391	6,228	0.475

Executive Summary Table 2. (cont.) Eureka/South Columbia area. Decision table for three future spawning biomass states-of-nature and three catch scenarios. The 'status quo' fixes the fishing mortality rate that closely matches the 2005 catch to what was seen in 2004.

Decision Table Eureka\ South Columbia				Low state (less likely)		Middle state (more likely)		High state (less likely)	
	Year	Catch	Landings	Sp. Bio	Depletion	Sp. Bio	Depletion	Sp. Bio	Depletion
Status Quo (F99.2%)	2005	5.4	4.6	1,722	0.274	2,019	0.321	2,366	0.377
	2006	6.4	5.4	2,011	0.320	2,384	0.380	2,827	0.450
	2007	7.2	6.0	2,420	0.385	2,933	0.467	3,554	0.566
	2008	7.7	6.5	2,862	0.456	3,547	0.565	4,395	0.700
	2009	8.2	6.9	3,216	0.512	4,035	0.642	5,061	0.806
	2010	8.5	7.1	3,447	0.549	4,328	0.689	5,434	0.865
	2011	8.6	7.2	3,589	0.572	4,480	0.713	5,591	0.890
	2012	8.7	7.3	3,683	0.586	4,556	0.725	5,635	0.897
	2013	8.8	7.4	3,749	0.597	4,593	0.731	5,626	0.896
	2014	8.8	7.4	3,796	0.604	4,609	0.734	5,596	0.891
F50% Moderate Catch (F50%)	2005	540.2	453.8	1,722	0.274	2,019	0.321	2,366	0.377
	2006	601.5	505.2	1,864	0.297	2,214	0.352	2,628	0.419
	2007	635.1	533.5	2,094	0.333	2,548	0.406	3,101	0.494
	2008	645.6	542.3	2,315	0.369	2,887	0.460	3,601	0.573
	2009	646.2	542.8	2,432	0.387	3,074	0.489	3,884	0.619
	2010	633.2	531.9	2,440	0.389	3,087	0.491	3,904	0.622
	2011	612.4	514.4	2,393	0.381	3,007	0.479	3,779	0.602
	2012	594.4	499.3	2,329	0.371	2,902	0.462	3,615	0.576
	2013	578.9	486.3	2,266	0.361	2,799	0.446	3,457	0.550
	2014	565.3	474.9	2,207	0.351	2,707	0.431	3,321	0.529
High Catch (F45%)	2005	554.0	465.3	2,154	0.343	2,629	0.419	3,210	0.511
	2006	544.9	457.7	2,108	0.336	2,565	0.408	3,121	0.497
	2005	636.0	534.2	1,722	0.274	2,019	0.321	2,366	0.377
	2006	700.3	588.3	1,838	0.293	2,183	0.348	2,593	0.413
	2007	731.5	614.5	2,038	0.324	2,483	0.395	3,024	0.482
	2008	735.7	618.0	2,225	0.354	2,780	0.443	3,473	0.553
	2009	728.9	612.3	2,308	0.368	2,924	0.466	3,703	0.590
	2010	707.9	594.7	2,288	0.364	2,902	0.462	3,679	0.586
	2011	679.5	570.8	2,219	0.353	2,797	0.445	3,526	0.561
	2012	655.6	550.7	2,141	0.341	2,676	0.426	3,345	0.533
	2013	635.5	533.8	2,067	0.329	2,564	0.408	3,179	0.506
	2014	618.3	519.4	2,002	0.319	2,467	0.393	3,040	0.484
	2015	604.2	507.6	1,945	0.310	2,386	0.380	2,928	0.466
	2016	593.1	498.2	1,896	0.302	2,321	0.370	2,841	0.452

Executive Summary Table 2. (cont.) All three areas combined. Decision table for three future spawning biomass states-of-nature and three catch scenarios. The 'status quo' fixes the fishing mortality rate (by area) that closely matches the 2005 catch to what was seen in 2004.

Decision Table Aggregate of All Three Areas				Low state (less likely)		Middle state (more likely)		High state (less likely)	
	Year	Catch	Landings	Sp. Bio	Depletion	Sp. Bio	Depletion	Sp. Bio	Depletion
Status Quo (F by Area)	2005	1,727	1,451	14,098	0.496	17,232	0.606	21,071	0.741
	2006	1,714	1,439	14,223	0.500	17,360	0.611	21,196	0.746
	2007	1,726	1,450	14,671	0.516	17,962	0.632	21,997	0.774
	2008	1,752	1,471	15,298	0.538	18,849	0.663	23,230	0.817
	2009	1,783	1,498	15,948	0.561	19,765	0.696	24,503	0.862
	2010	1,818	1,527	16,583	0.584	20,602	0.725	25,601	0.901
	2011	1,853	1,557	17,242	0.607	21,354	0.751	26,450	0.931
	2012	1,884	1,583	17,921	0.631	22,022	0.775	27,065	0.952
	2013	1,911	1,605	18,564	0.653	22,609	0.796	27,536	0.969
	2014	1,933	1,623	19,127	0.673	23,115	0.813	27,934	0.983
	2015	1,951	1,639	19,600	0.690	23,547	0.829	28,288	0.995
	2016	1,965	1,651	19,989	0.703	23,913	0.841	28,608	1.007
F50% Moderate Catch (F50%)	2005	4,940	4,150	14,098	0.496	17,232	0.606	21,071	0.741
	2006	4,743	3,985	13,226	0.465	16,169	0.569	19,774	0.696
	2007	4,634	3,893	12,779	0.450	15,717	0.553	19,335	0.680
	2008	4,578	3,846	12,578	0.443	15,620	0.550	19,402	0.683
	2009	4,562	3,832	12,470	0.439	15,621	0.550	19,573	0.689
	2010	4,562	3,832	12,433	0.438	15,637	0.550	19,668	0.692
	2011	4,566	3,835	12,505	0.440	15,669	0.551	19,635	0.691
	2012	4,573	3,841	12,659	0.445	15,714	0.553	19,508	0.686
	2013	4,579	3,847	12,819	0.451	15,761	0.555	19,379	0.682
	2014	4,584	3,850	12,945	0.456	15,804	0.556	19,294	0.679
	2015	4,587	3,853	13,032	0.459	15,839	0.557	19,252	0.677
	2016	4,589	3,855	13,089	0.461	15,870	0.558	19,241	0.677
High Catch (F45%)	2005	5,830	4,897	14,098	0.496	17,232	0.606	21,071	0.741
	2006	5,490	4,611	12,949	0.456	15,839	0.557	19,380	0.682
	2007	5,278	4,434	12,285	0.432	15,135	0.533	18,650	0.656
	2008	5,148	4,324	11,910	0.419	14,835	0.522	18,481	0.650
	2009	5,079	4,266	11,665	0.410	14,672	0.516	18,457	0.649
	2010	5,040	4,234	11,524	0.405	14,558	0.512	18,395	0.647
	2011	5,016	4,213	11,514	0.405	14,490	0.510	18,236	0.642
	2012	5,001	4,201	11,599	0.408	14,456	0.509	18,017	0.634
	2013	4,991	4,192	11,698	0.412	14,440	0.508	17,825	0.627
	2014	4,982	4,185	11,771	0.414	14,433	0.508	17,698	0.623
	2015	4,975	4,179	11,815	0.416	14,431	0.508	17,626	0.620
	2016	4,970	4,175	11,840	0.417	14,431	0.508	17,590	0.619

STOCK ASSESSMENTS FOR 2007-2008 GROUNDFISH FISHERIES

The Scientific and Statistical Committee (SSC) evaluated ten stock assessments at the June meeting which had been reviewed during three Stock Assessment Review Panel (STAR) meetings in April and May 2005. Draft SSC statements on these species are organized below by STAR Panel and were drafted following the June SSC meeting. Therefore, these statements have not yet received a final review by the full SSC. The SSC is scheduled to review and possibly revise these statements at the September meeting. Additional notes and technical recommendations of the SSC can be found in the draft June SSC meeting minutes (Ancillary D).

April 18-22 STAR Panel, Seattle, Washington - English Sole, Petrale Sole, Starry Flounder

English Sole

The SSC reviewed the assessment and Stock Assessment and Review (STAR) Panel reports for English sole (*Parophrys vetulus*). The stock of English sole off the U.S. West Coast had not previously been assessed on a coastwide basis; the most recent previous assessment, completed in 1993, was restricted to the stock off Oregon and Washington. The new assessment reconstructed the catch history back to the late 1800s, the assumed start of fishing. For the analysis the stock was divided into southern and northern fisheries and surveys, with detailed length and age composition data available primarily for the northern fishery. The only observations of trends in relative biomass were from the National Marine Fisheries Service (NMFS) triennial shelf bottom trawl survey, which has indicated very large increases during the past decade in the biomass of English sole in both the southern and northern areas. The assessment concludes that the current spawning stock biomass of English sole is very large relative to the unexploited level (91.5% at the start of 2005) and that current exploitation is very low. The SSC found this to be a very thorough assessment and endorses the English sole stock assessment as providing the best available science and can form the basis for Council decision-making.

Starry Flounder

The SSC reviewed the assessment and STAR Panel reports for starry flounder (*Platichthys stellatus*). This is the first assessment of starry flounder off the U.S. West Coast. It is based on the assumption of separate biological populations north and south of Pt Conception, CA and uses data on catches, indices of relative abundance based on trawl logbook data, and an index of age-1 abundance from trawl surveys in the San Francisco Bay and Sacramento-San Joaquin River estuary. Unlike most other groundfish stock assessments, no age- or length-composition data are directly used in the assessment. Both the northern and southern populations are estimated to be likely above the target level of $B_{40\%}$, although the status of this data-poor species remains fairly uncertain compared to that of many other groundfish species. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and that it can form the basis for Council decision-making.

Petrale Sole

The SSC reviewed the preliminary STAR Panel reports for Petrale sole (*Eopsetta jordani*). The petrale sole STAT team decided to treat the population off the U.S. West Coast as separate northern and southern stocks. The assessment for the southern stock (occupying the Eureka, Monterey, and Conception INPFC regions) was reviewed during the April STAR Panel meeting and subsequently completed and accepted by the STAR Panel. The assessment for the northern stock, however, was withdrawn from the April STAR Panel review because age-composition data for recent years, which might strongly influence the assessment's estimate of current stock status, arrived during the STAR Panel review. The assessment for the northern stock will be reviewed during the mop-up STAR Panel in late September.

At the time of the April STAR Panel the northern and southern petrale assessments used essentially the same model structure and the decision was taken to review the two assessments as a combined assessment and the two STAR Panel reports as a combined report, with the SSC review occurring at the November Council meeting. The STAT team, however, has decided that the structure of the northern assessment is likely to be revised and to differ substantively from the southern assessment.

The SSC recommends that the assessment document for the southern stock petrale sole be reviewed by the SSC at the September Council meeting and that the final STAR report, which will not be completed until after the September mop-up STAR, should have two sections, the results of the April panel for the south and the results of the mop-up panel for the north.

May 9-13, 2005 STAR Panel, Long Beach, California - Cowcod, Gopher Rockfish, Vermilion Rockfish, and California Scorpionfish

Gopher rockfish

The SSC reviewed the assessment and STAR Panel report for gopher rockfish (*Sebastes carnatus*). This is the initial assessment of gopher rockfish. Though the distribution of gopher rockfish extends south into Southern California Bight, the assessment is restricted to the stock north of Pt. Conception. The assessment is based on landings and length composition data from commercial and recreational fisheries (primarily hook and line gear), and an index of relative abundance (catch per unit effort) from the commercial passenger fishing vessel (CPFV) Sportfish Survey database. These data sources were used to estimate population trends from 1965 to 2004. There are no fishery-independent indices of stock biomass for gopher rockfish. Assessment results indicate an upward trend in gopher rockfish biomass since the 1980s and estimates of 2005 stock abundance ranged between 60% and 110% of unfished. Recent exploitation rates are estimated to have been well below the F_{MSY} proxy for rockfish. The SSC endorses the STAR Panel conclusions that this assessment represents the best available science and that it can form the basis for Council decision making.

Vermilion rockfish

The SSC reviewed the assessment and STAR Panel report for vermilion rockfish (*Sebastes miniatus*). This is the initial assessment of vermilion rockfish. The assessment is restricted to the stock in California waters. Separate assessment models were developed for the stock north and south of Pt. Conception. Recent genetic research suggests that vermilion rockfish is actually two species, however nothing is known about biological differences between the two species, or their

relative abundance. The assessment uses data on recreational and commercial catches, length-frequency data, and indices of relative abundance derived from CPFV and RecFin CPUE data. There are no fishery-independent indices of stock biomass for vermilion rockfish. Biomass estimates for most model configurations show an upward trend since about 1990, and recent exploitation rates are estimated to be near the F_{MSY} proxy for rockfish. However, fishing mortalities may have exceeded the F_{MSY} proxy for rockfish historically, and vermilion rockfish may have dropped temporarily below the overfished threshold prior to the recent increase. For the northern component, estimates of 2005 biomass ranged between 41% and 89% of unfished biomass, while for the southern component, the range was between 30% and 88% of unfished biomass.

The STAR Panel concluded the vermilion assessment is on the threshold of acceptability, and noted that model results show a very broad range of current stock sizes. The STAR Panel also concluded the stock does not currently appear to be overfished and overfishing is not occurring. The SSC does not fully concur with the STAR Panel conclusions. The SSC notes the available data indicate the stock was overfished in the past, and a few recent outliers appear to drive the recent upward trend in abundance. The assessment model produced divergent results and exhibited extreme sensitivity to what should be innocuous changes in data or assumptions. Vermilion rockfish is currently in a group of rockfish that are subject to precautionary management. Given concerns about assessment reliability, the SSC questions whether moving vermilion rockfish out of this precautionary group and basing management on this stock assessment can be justified. SSC considers the assessment to be best available science, but at this stage does not endorse the results as being suitable for setting OYs.

Cowcod

The SSC reviewed the assessment and STAR Panel report for cowcod (*Sebastes levis*). The first assessment of cowcod, in 1999, led to the stock being declared overfished and the establishment of a rebuilding plan. Like the previous assessment, this assessment is restricted to the stock south of Pt. Conception, although the distribution of cowcod extends further north. The assessment is based on catch data from commercial and recreational fisheries, an index of relative abundance (catch per unit effort) derived from commercial passenger fishing vessel (CPFV) data from 1963-2000, and a single visual transect survey conducted by submersible in the Cowcod Conservation Area (CCA) in 2002. Although assessment results suggest that cowcod are not as depleted as was estimated in the initial assessment, they are still overfished by Council criteria. Estimates of stock depletion in 2005 ranged from 14 to 21% depending on a plausible range of assumptions for the stock-recruit relationship. Rebuilding measures appear to have been successful in reducing cowcod exploitation rates to negligible levels. The SSC endorses the STAR Panel conclusions that this assessment represents the best available science and that it can form the basis for Council decision making.

California scorpionfish

California scorpionfish (*Scorpaena guttata*) is related taxonomically to rockfish, but exhibits different behavior and biology. Unlike rockfish, scorpionfish form dense spawning aggregations and releases eggs rather than larvae. Although the species ranges south into Mexican waters, the assessment evaluates stock status in US waters south of Pt. Conception. This is the first stock assessment of California scorpionfish. The assessment is based on landings and length composition data from commercial and recreational fisheries and an index of relative abundance

(catch per unit effort) derived from commercial passenger fishing vessel (CPFV) logbook data from 1980-1999. A fishery-independent index of abundance was obtained by combining trawl surveys by sanitation districts in southern California. Assessment results indicate an upward trend in California scorpionfish biomass since the 1970s. Estimates of 2005 stock abundance ranged between 60% and 80% of unfished stock size. Estimates of historical exploitation rates are uncertain, but apparently were significantly higher than the Council's FMSY proxy of $F_{50\%}$ for most of the last three decades. The current high abundance of scorpionfish is most likely the result of favorable environmental conditions. The SSC endorses the STAR Panel conclusions that this assessment represents the best available science and that it can form the basis for Council decision making.

May 16-20, 2005 STAR Panel, Seattle, Washington – Pacific Ocean Perch, Darkblotched Rockfish, Cabezon

Darkblotched Rockfish

The SSC reviewed the assessment and STAR Panel report for darkblotched rockfish (*Sebastes crameri*), which was assessed as a single stock ranging from California to the Canadian border. The last full stock assessment occurred in 2000 and estimated spawning biomass to be 22% of the unfished level. It was subsequently declared overfished in January 2001 and a rebuilding plan was implemented, based on results from an updated assessment conducted in 2001. The assessment model was again updated in 2003 using recent data. Notably, both updated stock assessments resulted in depletion estimates considerably lower than the original assessment. The 2005 analysis was a full assessment and incorporated a number of significant changes to the model, including: (1) use of Stock Synthesis II, (2) starting the model in 1928 vs. 1963, (3) estimating growth parameters within the model, (4) estimation of discard rates and retention curves within the model, (5) eliminating all age composition data except for shelf trawl survey ages read in 2004, and (6) use of delta-GLM estimates of abundance from the AFSC slope survey. Model estimates of abundance are influenced primarily by three fishery-independent surveys, i.e., the AFSC triennial shelf and slope trawl surveys and the NWFSC combined trawl survey. Results of the assessment indicate that spawning output has more than doubled since 1999 (i.e., 8% to 17% of the unfished level) and that rebuilding is occurring due to strong 1999 and 2000 year-classes. Moreover, recent exploitation rates have been quite low (2-3%). The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and that it can form the basis for Council decision-making.

Pacific Ocean Perch (POP)

The SSC reviewed the updated assessment and STAR Panel report pertaining to the stock of Pacific ocean perch (POP, *Sebastes alutus*) residing in the combined US Vancouver-Columbia INPFC areas. Historically POP catches were characterized by removals in excess of 5,000 mt-yr⁻¹ from 1962-68, largely due to extensive foreign fishing. In 1981 the Council adopted a 20-yr plan to rebuild what was considered a depleted resource, representing the first attempt at stock rebuilding by the PFMC. POP was declared overfished in 2001 and a rebuilding plan was officially adopted as Amendment 16-2 to the Groundfish FMP. The 2005 assessment is an update of the stock assessment model prepared in 2003. Consequently the model code is unchanged but data time series were extended to include: (1) catches through 2004, (2) fishery size compositions for 2003 and 2004, (3) NWFSC slope survey biomass estimates through 2004, (4) NWFSC slope survey age compositions for 2001, 2003, and 2004, (5) the triennial shelf

survey biomass estimate for 2004, and (6) triennial shelf survey age compositions for 1995 and 2004. Results of the assessment show that exploitation rates have been very low since 2000 (~1% per yr) and that the stock is slowly rebuilding (depletion in 2005 was 23.4%, up from 20.9% in 2000). Relatively strong recruitments occurred in 2002 and 2003, representing the 1999 and 2000 year-classes. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and that it can form the basis for Council decision-making.

Cabazon

The SSC reviewed the assessment and STAR Panel report for cabazon (*Scorpaenichthys marmoratus*). The assessment only considered cabazon residing in the State of California and divided the population into two stocks, one north of Point Conception (NCS) and one south of Point Conception (SCS), based on different historical patterns of exploitation. The northern stock has been the primary area from which removals have occurred, principally due to a greater commercial harvest in that region. Splitting the assessment model into separate northern and southern stocks departs from the approach taken in the previous assessment that was conducted in 2003, which treated the entire State as a unit stock. In addition, 6 fisheries were modeled for each substock (4 recreational and 2 commercial) and 3 trend indices were evaluated for each area. Results of the assessment show that exploitation rates for the NCS and SCS stocks are close to their target values ($F_{45\%}$). Depletion levels, however, differ among the two areas, with the NCS stock close to its target population size ($B_{40\%}$), while the SCS stock is close to the minimum stock size overfished threshold ($B_{25\%}$). Furthermore, assessment results show that spawning output from the SCS stock was very low as recently as 2002 (i.e., 5% of the unfished level), but that strong recruitment has apparently occurred due to the 2000 and 2003 year-classes. Uncertainty about the strength of the 2000 year-class, in particular, was highlighted in a decision table analysis. The stock assessment included projections for both stocks under the Council's default 40:10 harvest policy, as well as the State of California's nearshore management plan 60:20 harvest policy. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and that it can form the basis for Council decision-making.

PFMC

08/31/05

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
STOCK ASSESSMENTS FOR 2007-2008 GROUND FISH FISHERIES

April 18-22 STAR Panel, Seattle, Washington - English Sole, Petrale Sole, Starry Flounder

English Sole

The SSC reviewed the assessment and Stock Assessment and Review (STAR) Panel reports for English sole (*Parophrys vetulus*). The stock of English sole off the U.S. West Coast had not previously been assessed on a coastwide basis; the most recent previous assessment, completed in 1993, was restricted to the stock off Oregon and Washington. The new assessment reconstructed the catch history back to the late 1800s, the assumed start of fishing. For the analysis the stock was divided into southern and northern fisheries and surveys, with detailed length and age composition data available primarily for the northern fishery. The only observations of trends in relative biomass were from the National Marine Fisheries Service (NMFS) triennial shelf bottom trawl survey, which has indicated very large increases during the past decade in the biomass of English sole in both the southern and northern areas. The assessment concludes that the spawning stock biomass of English sole at the start of 2005 was 92% of the unexploited level and that current exploitation is very low. The SSC found this to be a very thorough assessment and endorses the English sole stock assessment as providing the best available science and can form the basis for Council decision-making.

Starry Flounder

The SSC reviewed the assessment and STAR Panel reports for starry flounder (*Platichthys stellatus*). This is the first assessment of starry flounder off the U.S. West Coast. It is based on the assumption of separate biological populations north and south of the CA / OR border and uses data on catches, indices of relative abundance based on trawl logbook data, and an index of age-1 abundance from trawl surveys in the San Francisco Bay and Sacramento-San Joaquin River estuary. Unlike most other groundfish stock assessments, no age- or length-composition data are directly used in the assessment. Both the northern and southern populations are estimated to be above the target level of $B_{40\%}$, although the status of this data-poor species remains fairly uncertain compared to that of many other groundfish species. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

Petrable Sole

The Petrale sole (*Eopsetta jordani*) Stock Assessment Team (STAT) decided to treat the population off the U.S. West Coast as separate northern and southern stocks. The assessment for the northern stock was withdrawn from the April STAR Panel review because age-composition data for recent years, which might influence the assessment's estimate of current stock status, arrived during the review. The assessment for the northern stock will be reviewed during the mop-up STAR Panel in late September.

The SSC reviewed the assessment and Draft STAR Panel reports for the southern stock of petrale sole. The revised assessment document received following the STAR Panel was incomplete and could not be thoroughly reviewed and approved by the SSC. The STAT Team

will be informed of the missing information and the SSC will review the revised document at its November meeting. Depending on the outcome of the mop-up STAR review of the northern petrale assessment, the SSC may request additional analyses from the STAT team for the southern petrale assessment.

May 9-13, 2005 STAR Panel, Long Beach, California - Cowcod, Gopher Rockfish, Vermilion Rockfish, and California Scorpionfish

Gopher rockfish

The SSC reviewed the assessment and STAR Panel report for gopher rockfish (*Sebastes carnatus*). This is the initial assessment of gopher rockfish. Though the distribution of gopher rockfish extends south into the Southern California Bight, the assessment is restricted to the stock north of Pt. Conception. The assessment is based on landings and length composition data from commercial and recreational fisheries (primarily hook and line gear), and an index of relative abundance (catch per unit effort) from the commercial passenger fishing vessel (CPFV) Sportfish Survey database. These data sources were used to estimate population trends from 1965 to 2004. There are no fishery-independent indices of stock biomass for gopher rockfish. Assessment results indicate an upward trend in gopher rockfish biomass since the 1980s and estimates of 2005 abundance ranged between 60% and 110% of average unfished stock size. Recent exploitation rates are estimated to have been well below the F_{MSY} proxy for rockfish. The SSC endorses the STAR Panel conclusions that this assessment represents the best available science and can form the basis for Council decision-making.

Vermilion rockfish

The SSC reviewed the assessment and STAR Panel report for vermilion rockfish (*Sebastes miniatus*). This is the initial assessment of vermilion rockfish. The assessment is restricted to the stock in California waters. Separate assessment models were developed for the stock north and south of Pt. Conception. Recent genetic research indicates that vermilion rockfish is actually two species, however nothing is known about biological differences between the two species, or their relative abundance. The two species were assessed as a single stock. The assessment uses data on recreational and commercial catches, length-frequency data, and indices of relative abundance derived from CPFV and RecFin CPUE data. There are no fishery-independent indices of stock biomass for vermilion rockfish. Biomass estimates for most model configurations show an upward trend since about 1990, and recent exploitation rates are estimated to be near the F_{MSY} proxy for rockfish. However, fishing mortality rates may have exceeded the F_{MSY} proxy for rockfish historically, and vermilion rockfish may have dropped temporarily below the overfished threshold prior to the recent increase. For the northern component, estimates of 2005 biomass ranged between 41% and 89% of average unfished biomass, while for the southern component, the range was between 30% and 88% of average unfished biomass.

The STAR Panel was unable to identify a base model for vermilion rockfish, and instead proposed a pair of models to illustrate the range of uncertainty in stock status. The STAR Panel concluded the stock does not currently appear to be overfished and overfishing is not occurring. The SSC does not fully concur with the STAR Panel conclusions. The SSC notes the available data indicate the stock was overfished in the past, and a few recent extreme values appear to drive the recent upward trend in abundance. The assessment model produced divergent results and exhibited extreme sensitivity to what should be innocuous changes in data or assumptions.

Vermilion rockfish is currently in a group of data-poor rockfish that are subject to restrictive management. Given concerns about assessment reliability, the SSC questions whether moving vermilion rockfish out of this data-poor group and basing management on this stock assessment can be justified. SSC considers the assessment to be best available science, but at this stage does not endorse the results as being suitable for setting OYs.

Cowcod

The SSC reviewed the assessment and STAR Panel report for cowcod (*Sebastes levis*). The first assessment of cowcod in 1999 led to the stock being declared overfished and the establishment of a rebuilding plan. Like the previous cowcod assessment, this assessment is restricted to the stock south of Pt. Conception, although the distribution of cowcod extends further north. The assessment is based on catch data from commercial and recreational fisheries, an index of relative abundance (catch per unit effort) derived from commercial passenger fishing vessel (CPFV) data from 1963-2000, and a single visual transect survey conducted by submersible in the Cowcod Conservation Area (CCA) in 2002. Although assessment results suggest that cowcod are less depleted than was estimated in the initial cowcod assessment, they are still overfished by Council criteria. Estimates of stock size in 2005 ranged from 14 to 21% of mean unfished stock size depending on a plausible range of assumptions for the stock-recruit relationship. Rebuilding measures appear to have been successful in reducing cowcod exploitation rates to negligible levels. The SSC endorses the STAR Panel conclusions that this assessment represents the best available science and can form the basis for Council decision-making.

California scorpionfish

California scorpionfish (*Scorpaena guttata*) is related taxonomically to rockfish, but exhibits different behavior and biology. Unlike rockfish, scorpionfish form dense spawning aggregations and release eggs rather than larvae. Although the species ranges south into Mexican waters, the assessment evaluates stock status in US waters south of Pt. Conception. This is the first stock assessment of California scorpionfish. The assessment is based on landings and length composition data from commercial and recreational fisheries and an index of relative abundance (catch per unit effort) derived from commercial passenger fishing vessel (CPFV) logbook data from 1980-1999. A fishery-independent index of abundance was obtained by aggregating nearshore trawl surveys conducted by sanitation districts to assess outfall impacts. Assessment results indicate an upward trend in California scorpionfish biomass since the 1970s. Estimates of 2005 stock abundance ranged between 60% and 80% of average unfished stock size. Estimates of historical exploitation rates are uncertain, but apparently were significantly higher than the Council's FMSY proxy of $F_{50\%}$ for most of the last three decades. The current high abundance of scorpionfish is surprising given historical exploitation rates, and may be a result of favorable environmental conditions. The SSC endorses the STAR Panel conclusions that this assessment represents the best available science and can form the basis for Council decision-making.

May 16-20, 2005 STAR Panel, Seattle, Washington – Pacific Ocean Perch, Darkblotched Rockfish, Cabezon

Darkblotched Rockfish

The SSC reviewed the assessment and STAR Panel report for darkblotched rockfish (*Sebastes crameri*), which was assessed as a single stock ranging from California to the Canadian border. The last full stock assessment occurred in 2000 and estimated spawning biomass was 22% of the unfished level. It was subsequently declared overfished in January 2001 and a rebuilding plan was implemented, based on results from an updated assessment conducted in 2001. The assessment model was again updated in 2003 using recent data. Notably, both updated stock assessments concluded the stock was considerably more depleted than the original assessment. The 2005 analysis was a full assessment and incorporated a number of significant changes to the model, including: (1) use of Stock Synthesis II, (2) starting the model in 1928 vs. 1963, (3) estimating growth parameters within the model, (4) estimation of discard rates and retention curves within the model, (5) eliminating all age composition data except for shelf trawl survey ages read in 2004, and (6) use of delta-GLM estimates of abundance from the AFSC slope survey. Model estimates of abundance are influenced primarily by four fishery-independent surveys, i.e., the AFSC triennial shelf, POP, and slope trawl surveys and the NWFSC slope trawl survey. Results of the assessment indicate that spawning output has more than doubled since 1999 (i.e., 8% to 17% of the unfished level) and that rebuilding is occurring due to strong 1999 and 2000 year-classes. Moreover, recent exploitation rates have been quite low (2-3%). The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

Pacific Ocean Perch (POP)

The SSC reviewed the updated assessment and STAR Panel report pertaining to the stock of Pacific ocean perch (POP, *Sebastes alutus*) residing in the combined U.S. Vancouver-Columbia INPFC areas. Historically POP catches were characterized by removals in excess of 5,000 mt per year⁻¹ from 1962-68, largely due to extensive foreign fishing. In 1981 the Council adopted a 20-yr plan to rebuild what was considered a depleted resource, representing the first attempt at stock rebuilding by the PFM. POP was declared overfished in 2001 and a rebuilding plan was officially adopted as Amendment 16-2 to the Groundfish FMP. The 2005 assessment is an update of the stock assessment model prepared in 2003. Consequently the model code is unchanged but data time series were extended to include: (1) catches through 2004, (2) fishery size compositions for 2003 and 2004, (3) NWFSC slope survey biomass estimates through 2004, (4) NWFSC slope survey age compositions for 2001, 2003, and 2004, (5) the triennial shelf survey biomass estimate for 2004, and (6) triennial shelf survey age compositions for 1995 and 2004. Results of the assessment show that exploitation rates have been very low since 2000 (1% per yr) and that the stock is slowly rebuilding (relative spawning stock biomass in 2005 was 23%, up from 21% in 2000). Relatively strong recruitments occurred in 2002 and 2003, representing the 1999 and 2000 year-classes. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

Cabazon

The SSC reviewed the assessment and STAR Panel report for cabazon (*Scorpaenichthys marmoratus*). The assessment only considered cabazon residing in the State of California and divided the population into two stocks, one north of Point Conception (NCS) and one south of Point Conception (SCS), based on different historical patterns of exploitation. The northern stock has been the primary area from which removals have occurred, principally due to a greater commercial harvest in that region. Splitting the assessment model into separate northern and southern stocks departs from the approach taken in the previous assessment that was conducted in 2003, which treated the entire State as a unit stock. In addition, six fisheries were modeled for each substock (four recreational and two commercial) and three trend indices were evaluated for each area. Results of the assessment show that exploitation rates for the NCS and SCS stocks are close to their target values ($F_{45\%}$). Depletion levels, however, differ among the two areas, with the NCS stock close to its target population size ($B_{40\%}$), while the SCS stock is close to the minimum stock size overfished threshold ($B_{25\%}$). Furthermore, assessment results show that spawning output from the SCS stock was very low as recently as 2002 (i.e., 5% of the unfished level), but that strong recruitment has apparently occurred due to the 2000 and 2003 year-classes. Uncertainty about the strength of the 2000 year-class, in particular, was highlighted in a decision table analysis. The stock assessment included projections for both stocks under the Council's default 40:10 harvest policy, as well as the State of California's nearshore management plan 60:20 harvest policy. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

June 20-24, 2005 STAR Panel, Newport, OR – Sablefish, Dover Sole, Shortspine Thornyhead, Longspine Thornyhead

Sablefish

The SSC reviewed the sablefish (*Anoplopoma fimbria*) assessment and STAR Panel reports. A summary of the assessment was presented by the lead author, Dr. Michael Schirripa. This assessment extends from the southern border of the Conception INPFC area through the northern border of the U.S. Vancouver INPFC area. This stock has been assessed several times in recent years. The most recent previous full assessment was in 2001, which formed the basis of an "update" that was conducted in 2002 so that new information could be included to better estimate the abundance of the comparatively strong 1999 and 2000 year classes.

Sablefish are taken in the commercial fishery with hook and line, pot, and trawl gear. Estimates of landings by gear are available beginning in 1915, and landings were projected further back to an assumed start of the fishery in 1900 for this assessment. As in previous assessments, this assessment makes use of several abundance indices: the 1980-2004 AFSC triennial shelf survey, the 1971-1991 AFSC pot survey, the 1997-2001 AFSC slope survey, the 1984-2004 NWFSC slope survey, and the 1978-1988 logbook CPUE index. The Base Model for the assessment included use of sea level data to model recruitment deviations from the stock-recruitment function. Also, sea surface temperature data were used to model discard mortality rates which in the previous assessment were assumed to be 100%.

The Base Model spawning biomass for 2005 is estimated to be 35% of the unfished size, with an increasing trend during the past few years due to the comparatively strong 1999 and 2000 year classes. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

Dover sole

The SSC reviewed the assessment of Dover sole (*Microstomus pacificus*) and the STAR Panel report. A summary of the assessment was presented by the author, Dr. David Sampson. Dover sole that reside in the waters off California, Oregon and Washington were treated as a single stock in the assessment. This stock was last assessed in 2001.

The length and age composition data were separated into two fisheries: a northern fishery operating in the U.S. Vancouver and Columbia INPFC regions and a southern fishery in the Eureka, Monterey and Conception regions. The period modeled in the assessment extended from 1910 to 2004 with fishing beginning in 1911. Data in the assessment model included fishery length composition data from 1966 to 2004 and fishery age composition data from 1981 to 2004. The biomass indices were derived from trawl logbook catch rates (1978 to 1995), and biomass estimates and length and age composition data from bottom trawl research surveys of the shelf (1980 to 2004) and slope (1992 to 2004).

The size and sex distributions of Dover sole are highly variable, by depth and among INPFC areas, and have changed over time. These patterns and other size related issues, such as a tendency for the fish discarded in the south fishery being larger than those retained, were difficult to model in the assessment. Convergence issues complicated the choice of a Base Model. However the STAR Panel and STAT were able to choose one based on the preliminary Base Model and sensitivity analyses for the spawner-recruit steepness parameter (h) and natural mortality (M).

The stock has exhibited an increasing trend since about 1995, with the spawning biomass for 2005 estimated to be 63% of the unfished level. The SSC endorses the Dover sole stock assessment as providing the best available science and recommends that it form the basis for Council decision-making.

Shortspine Thornyhead

The SSC reviewed the shortspine thornyhead (*Sebastolobus alascanus*) assessment and STAR Panel reports. A summary of the assessment was presented by the author, Dr. Owen Hamel. This stock occurs from Baja California to the Bering Sea and is most abundant in the depth range of 180-450 meters. Shortspine thornyhead have been assessed several times over the last 15 years, most recently in 2001.

The largest modeling changes from the previous assessment are that the current assessment encompasses the entire west coast and the slope surveys are modeled as having dome-shaped selectivity. The previous assessment excluded those areas south of Pt. Conception, and including the entire Conception area results in a larger basis for unfished biomass. Other changes compared to the previous assessment included the addition of catch estimates for 1901-1961, new estimates of the shortspine portion of “unspecified thornyheads” in recent landings, recalculated length compositions for the fishery in 1981-2004, and new discard rates based on the west coast groundfish observer program for 2002 and 2003.

The Base Model for this assessment describes a single stock with two fisheries, north and south. Because of the sparseness and quality of the data, natural mortality, steepness and survey efficiency (q) were all fixed. The STAR Panel noted that the supporting data and the subsequent assessment were just marginally sufficient to estimate the resource status. Therefore the biological reference points and the forecasts in the decision table should be considered with

caution. There could be regional management concerns with this stock because the assessment OY is coastwide while there are differences in historic exploitation rates north and south of Point Conception.

The spawning biomass for 2005 is estimated to be 63% of unfished abundance, with a weakly falling recent trend. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

Longspine Thornyhead

The SSC reviewed the longspine thornyhead (*Sebastolobus altivelis*) assessment and STAR Panel reports. Longspine thornyhead have been assessed three times previously, most recently in 1997. The model assumed one coastwide stock (Conception to U.S. Vancouver areas), with one coastwide trawl fishery. Fishery independent survey data was combined as a single index based on a GLM of the AFSC and NWFSC slope surveys, which produced abundance indices and length compositions.

Results from the Base Model suggested that survey information (length compositions) was influencing recruitment in the model, such that the model estimated slightly higher recruitment in the early 1990s, which declined in the mid to late 1990s. The spawning biomass in 2005 was approximately 71% of unfished spawning biomass, but this estimate is highly uncertain as is evident in the comparatively large 95% confidence interval for the spawning biomass. A suite of sensitivity analyses bracketed some of the areas of uncertainty in catchability, selectivity, mortality and steepness that formed a basis for considering and discussing major areas of uncertainty for the decision table. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

August 1-5, 2005 STAR Panel, Santa Cruz, CA – Widow Rockfish, Bocaccio, Blackgill Rockfish, Kelp Greenling

Widow Rockfish

The SSC reviewed the assessment and Stock Assessment and Review (STAR) Panel reports for widow rockfish (*Sebastes entomelas*). The stock, which was last assessed in 2003, is treated as a single coastwide stock harvested by four fisheries. The new assessment uses the same age-based model as the 2003 assessment with updated landings data, additional age composition data, and revised abundance indices. Although the assessment could have been treated as an update, it was reviewed as a full assessment.

In 2000 the stock was assessed as being overfished and has been subject to a rebuilding plan since 2001. The current assessment's base model estimates that spawning biomass declined steadily since the late 1980s and that spawning output in 2004 was 31% of the unexploited level, above the Council's minimum stock size threshold (MSST). Further, spawning output in the base model was estimated to have never dropped below the 25% overfished MSST. Alternative model runs, which were considered to be only slightly less plausible than the base model, however, indicated that the stock had been below the MSST. Lack of a reliable abundance index for widow rockfish is a major source of uncertainty for the assessment results.

The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and that it can form the basis for Council decision-making.

Bocaccio

The SSC reviewed the assessment and STAR Panel report for bocaccio (*Sebastes paucispinis*), which was evaluated under the Terms of Reference for Expedited Stock Assessments. The assessment completed this year is an update, which requires close adherence to the last assessment that was conducted in 2003. Two important time series of data were extended this year, including the AFSC triennial shelf trawl survey and the CalCOFI larval abundance index, both of which were updated using a GLM analysis. In addition, fishery and survey length-distributions were updated through 2004. The STAR Panel agreed that the analysis satisfied the basic requirements for an expedited assessment, i.e., the model was identical to the 2003 assessment because SS1 was retained as the analytical framework and no structural changes to the model were made. Three runs were included in the 2003 stock assessment. The base-case model is known as STATc, which was bounded by two models known as STARB1 and STARB2. The updated base-case model estimates that current spawning output is 11% of that expected from an unfished stock. The SSC endorses the STAR Panel's conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

Blackgill rockfish

The SSC reviewed the assessment and STAR Panel report for blackgill rockfish (*Sebastes melanostomus*). The assessment pertains to the stock in the Monterey and Conception INPFC areas, where over 90% of the landings have occurred. Blackgill rockfish extend south into Mexican waters. The assessment is based on catch and length composition data from commercial fisheries and indices of relative abundance and size composition from the AFSC shelf trawl survey and the AFSC slope survey. Estimates of stock size in 2005 ranged from 36% to 67% of mean unfished spawning stock size depending on a plausible range of assumptions for natural mortality, but are highly uncertain due to a lack of assessment data. Assessment results indicate that recent exploitation rates have been slightly below the F_{MSY} proxy for rockfish. The SSC endorses the STAR Panel conclusions that this assessment represents the best available science and can form the basis for Council decision-making.

Kelp Greenling

The SSC reviewed the stock assessment and STAR Panel report for kelp greenling (*Hexagrammos decagrammus*), which was treated as two completely independent sub-stocks divided at the California-Oregon border. There are substantial differences between the two assessments with respect to assessment period, model assumptions, results, and uncertainties. An important difference between the two sub-stocks is the first year for which historical catch data are available (1916 for California and 1981 for Oregon). The Oregon sub-stock has some age-at-length data, which were included in the assessment and provide information on growth and variation in length-at-age. The estimate of relative stock size for the Oregon sub-stock (49% of unfished) is more certain than estimates of absolute abundance, which are highly imprecise. The SSC cautions that yield estimates from the model are very uncertain, but concluded that assessment results from the Oregon sub-stock represent the best available science and can form the basis for Council decision-making, in that region. For the California sub-stock, considerable effort was made to identify a plausible model formulation, but none could be identified. Despite providing a comprehensive summary and synthesis of available biological and fishery information, the SSC concluded that the results for the California sub-stock are inadequate to provide management advice.

August 15-19, 2005 STAR Panel, Seattle, WA – Canary Rockfish, Lingcod, Yelloweye Rockfish, and Yellowtail Rockfish

Canary Rockfish

The SSC reviewed the canary rockfish (*Sebastes pinniger*) assessment document and received a verbal report from the STAR Panel chair. The final STAR Panel report will be available for the November Council meeting.

The previous canary stock assessment was conducted in 2002. The new assessment used the Stock Synthesis 2 model (SS2). It included catch, length- and age-frequency data from 10 fishing fleets, including the trawl, non-trawl, and recreational sectors. The National Marine Fisheries Service (NMFS) triennial bottom trawl survey biomass index, length-frequency data, and age-frequency data were also included. The assessment provided estimates of stock abundance over the period 1916-2005. The principal result from the SS2 model was that the current spawning stock biomass (2005) was 5.3% of that expected in an unfished state (with a 95% confidence interval ranging from 2.7% to 7.9%). Canary rockfish are currently managed under a Council rebuilding plan, and these assessment results indicate that the stock remains in an overfished state with only a modest amount of rebuilding occurring in recent years. The STAR Panel concurred with the principal assessment conclusions, and endorsed the use of the assessment to support management decisions.

However, several technical issues were raised during the SSC's review of the canary assessment. Given the wide-ranging impact of restrictive canary harvest guidelines across many Council-managed groundfish, the SSC recommends that the canary assessment be revisited during the STAR "Mop-up" panel meeting (26-30 September 2005 in Seattle). More specifically, the SSC requests that the stock assessment team consider the following four issues, report on them, and be prepared to conduct additional runs during the "mop-up" meeting.

- (1) The survey catchability (q) estimated in the canary assessment appears to be considerably larger than the q estimated for other rockfishes. The validity of the q estimate should be investigated.
- (2) The assumed variability associated with the spawner-recruit relationship ($\sigma_R=0.4$) is small relative to that used for other rockfish. The sensitivity of the canary assessment results to larger values of σ_R should be explored.
- (3) Documentation more complete than that in the draft assessment document should be provided. Minimally, the updated selectivity curves and the SS2 data and control files should be made available.
- (4) Inclusion of the Santa Cruz juvenile survey data should be considered.

Lingcod

The SSC received a verbal report from the STAR Panel chair. The final STAR Panel report will be available for the November Council meeting. The lingcod (*Ophiodon elongatus*) assessment applies to the full Pacific Fishery Management Council (PFMC) management zone (the US-Vancouver, Columbia, Eureka, Monterey, and Conception INPFC areas). Separate assessment models were constructed to describe population trends in the northern (LCN: US-Vancouver,

Columbia) and southern (LCS: Eureka, Monterey, Conception) areas. Due to issues that could not be resolved during the STAR Panel meeting, both the LCN and LCS assessments will be taken up by the STAR “Mop-up” Panel (26-30 September 2005 in Seattle). The SSC will provide comments on both lingcod assessments at the November Council meeting.

Yelloweye Rockfish Update

The SSC reviewed the yelloweye rockfish (*Sebastes ruberrimus*) assessment document and received a verbal report from the STAR Panel chair. The final STAR Panel report will be available for the November Council meeting.

This assessment updates the status of the yelloweye rockfish resource off the west coast of the United States, from the Mexican border to Canadian border. This stock was treated as a single coastwide population as in the previous assessment conducted in 2002. The new assessment update extended the various data time series (as per the update ‘rules’) but did change the assessment model (using the new Stock Synthesis 2 model). This stock is being managed under a Council rebuilding plan. The assessment results indicate that current spawning stock biomass is 21% of the level expected in the unfished state. Both the STAR Panel and the SSC endorse the assessment update as the best available science and conclude that it can form the basis for Council management decisions.

The SSC notes that it will be especially difficult to monitor rebuilding progress for yelloweye due to the lack of an appropriate abundance index. There are no useful survey indices for yelloweye and the CPUE indices used in the assessment end in 2001 with the onset of restrictive regulations.

Yellowtail Rockfish

The SSC reviewed the yellowtail rockfish (*Sebastes flavidus*) assessment document and received a verbal report from the STAR Panel chair. The final STAR Panel report will be available for the November Council meeting.

The Council manages the U.S. fishery as two stocks separated at Cape Mendocino, California. As in the past, this assessment includes only the population between Cape Mendocino and 49° N. latitude (northern stock). The northern stock is divided into three assessment areas: South Vancouver, Northern Columbia, and Eureka/South Columbia. The northern stock areas were last assessed in 2000, and the assessment was updated in 2003. The new assessment update extended the various data time series and used the same stock assessment model as used in the 2000 full assessment and the 2003 update (i.e. an age-structured model written with AD Model Builder software). Results indicate that although abundance trends are somewhat different by area (little trend in South Vancouver and declining trends in the other areas), current spawning stock biomass is well above the overfished threshold. Both the STAR Panel and the SSC endorse the assessment update as the best available science and conclude that it can form the basis for Council management decisions.



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AUG 3 2005

PPMC

1 August 2005

Pacific Groundfish Conservation Trust, Inc.
P.O. Box 852
Newport, OR 97365

Canary Rockfish Project – Status Report

Since filing our preliminary report with the PGCT in early June we have taken several more field trips and collected additional samples of canary rockfish. This brief status report summarizes our findings to date. Although our results are geographically limited and thus cannot be extrapolated to provide a reliable estimate of the overall numbers of female canary rockfish, our preliminary finding that the overall proportion of females is 59%, indicating that there may be a much higher female-to-male sex ratio than predicted by the most recent stock assessment. Our data support the hypothesis that older female canary rockfish live in high-relief areas and may not be adequately sampled by trawl gear, as opposed to being subject to elevated rates of natural mortality, as assumed by the most recent stock assessment.

As of July 28th we had made six hook-and-line sampling trips of canary rockfish aboard chartered fishing boats from Westport, WA (F/V *The Slammer*, one trip; F/V *Tequila Too*, one trip), Neah Bay, WA (F/V *Discovery*, one trip), Depoe Bay, OR (F/V *The Tackle Buster*, one trip), Bandon, OR (F/V *Mis-Chief*, one trip), and Newport, OR (F/V *Delma Ann*, one trip). These six sampling trips produced a total of 194 canary rockfish, of which 112 were female, 78 male, and 4 immature (Table 1). The vast majority of the fish were caught by rod and reel using baited flies in deep water (50-70 fathoms) over very rough bottom. Three of the fish were caught using vertical long-line gear baited with squid during the trip out of Newport.

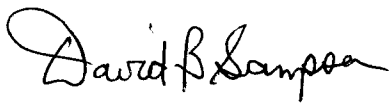
The female canary rockfish from these six trips had an average length of 52.4 cm and an average weight of 2.18 kg; (Table 2); the male fish had an average length of 50.2 cm and an average weight of 1.85 kg. The females had a much wider distribution of lengths than the males and were more skewed (Figure 1).

On July 29th we made an additional sampling trip from Westport and caught 14 canary rockfish from the "S. Gray's Canyon" site (9 females) and 18 fish from "The Barge" (10 females), but these additional fish are not included in the numbers depicted in the tables or figures. Including the fish from this most recent sampling trip the project has caught a total of 226 canary rockfish, of which 131 were female, 91 male, and 4 immature.

We took otoliths from all the canary rockfish that we caught and John Seigle, the project research assistant, made preliminary age readings for 57 of the otoliths using the break-and-burn method. For the selected fish the preliminary age-readings ranged from 7 to 16 years for the females (mean = 10.1 yr) and from 6 to 13 years for the males (mean = 9.7 yr). However, a comparison of the length-at-age data with the growth curve from the last assessment (Figure 2) indicates that John almost certainly under-aged the otoliths. Betty Kamikawa, the canary rockfish age-reading expert from the Newport age-reading laboratory, is doing an independent reading of some of the otoliths and will meet with John so that he can learn the standard protocols for age-reading canary rockfish otoliths.

We have one additional sampling trips planned (from Neah Bay, Washington) and by mid-August we should have sex and length data from 40 to 50 more canary rockfish. We are also hoping to make additional sampling trips during the summer from Bandon, Newport, and Garibaldi, Oregon and to expand our sampling into northern California during the autumn.

Sincerely

A handwritten signature in cursive script, reading "David B. Sampson".

David B. Sampson and Scott Heppell
Professor of Fisheries Assistant Professor, Senior Research

CC: Dr. Elizabeth Clarke, Northwest Fisheries Science Center
 Dr. Steven Freese, Northwest Region
 Dr. Donald McIsacc, Pacific Fishery Management Council

Table 1. Summary of canary rockfish catch by fishing location (excluding 32 fish caught on July 29th during a trip from Westport).

Port	Site	Approx. location		No. fish		
		Lat.	Long.	female	male	unknown
Neah Bay, WA	North Blue Dot	48° 20'	125° 20'	19	19	0
Westport, WA	The Barge	47° 00'	124° 45'	18	10	0
	S. Gray's Canyon Outside	46° 50'	124° 50'	17	12	0
	The Tooth - drift 1	46° 35'	124° 35'	19	7	0
	The Tooth - drift 2	46° 35'	124° 35'	15	6	0
Depoe Bay, OR	Off Siletz Bay			1	0	1
Newport, OR	North of Hecate Bank			7	6	0
Bandon, OR	Off Coos Bay	43° 15'	124° 30'	16	18	3

Port	Site	Av. Length (cm)		Max. Length (cm)	
		female	male unknown	female	male unknown
Neah Bay, WA	North Blue Dot	55.8	52.4	62.0	56.5
Westport, WA	The Barge	53.8	48.8	60.5	51.0
	S. Gray's Canyon Outside	52.9	48.4	61.0	52.5
	The Tooth - drift 1	52.8	49.4	58.0	52.0
	The Tooth - drift 2	52.0	51.9	56.5	53.5
Depoe Bay, OR	Off Siletz Bay	40.0	33.0	40.0	33.0
Newport, OR	North of Hecate Bank	56.8	50.9	62.9	52.8
Bandon, OR	Off Coos Bay	45.3	49.3 32.0	62.0	55.8 38.5

Table 2. Length frequency of the canary rockfish catch (excluding 32 fish caught on July 29th during a trip from Westport).

Length (cm)	No. fish by sex		
Lower bound	female	male	unknown
26	1		1
28			
30			1
32			1
34	1		
36	1		
38	1		1
40	3		
42	4	2	
44	3	3	
46	3	11	
48	11	15	
50	16	22	
52	15	19	
54	16	5	
56	18	1	
58	13		
60	3		
62	3		
Total	112	78	4

Av Length (cm) =	52.4	50.2	32.3
Av Weight (kg) =	2.18	1.85	0.48

Figure 1. Length frequency of the canary rockfish catch (N = 194, excluding 32 fish caught on July 29th during a trip from Westport).

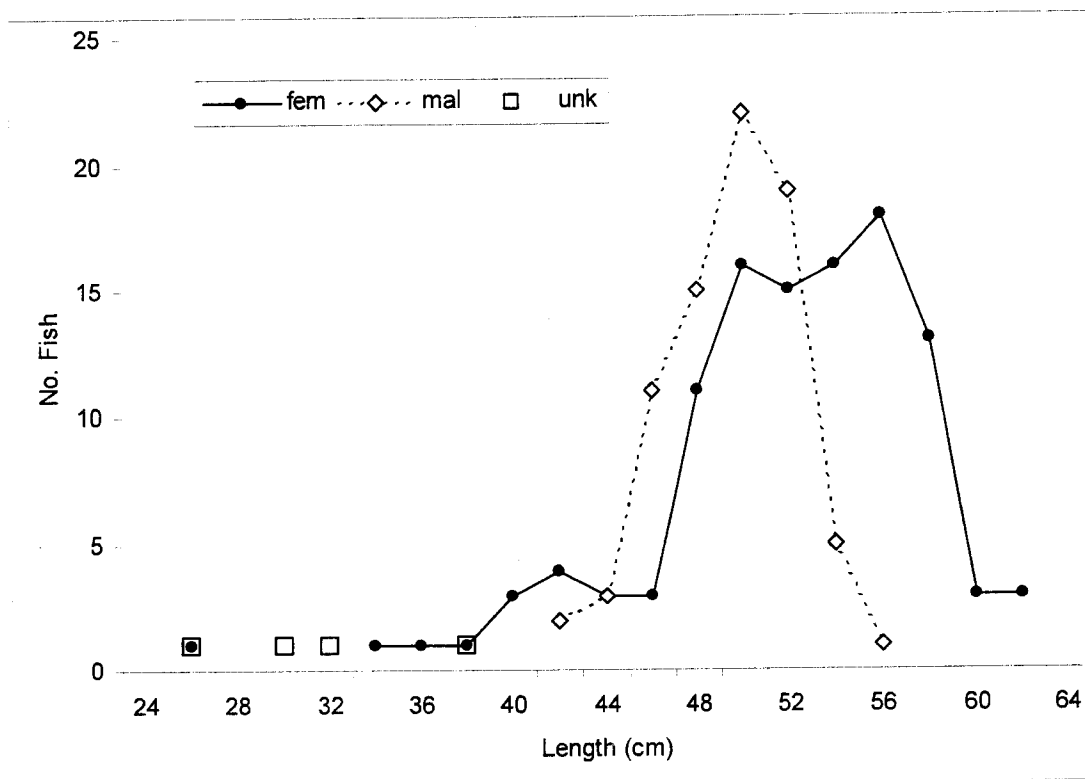
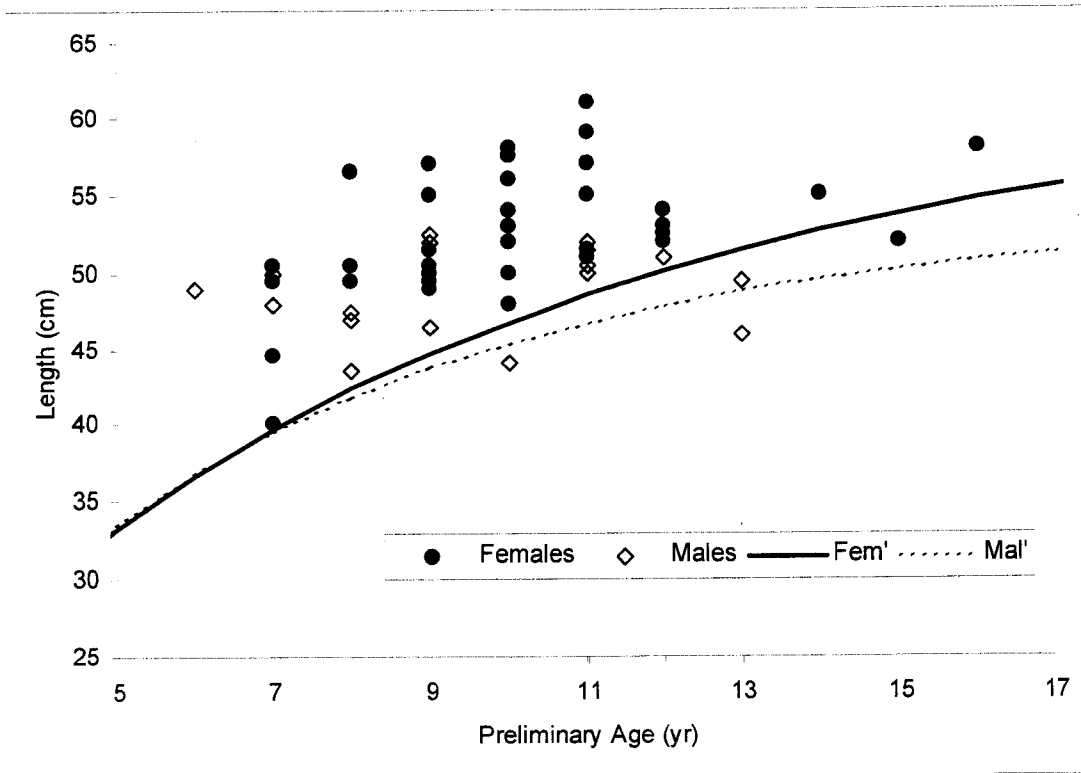


Figure 2. Length-at-age of part of the canary rockfish catch (N = 57). The lines are the predicted lengths-at-age based on the growth curves in the 2001 stock assessment. The data for one immature fish are not shown.



STOCK ASSESSMENTS FOR 2007-2008 GROUNDFISH FISHERIES

The Council process for setting groundfish harvest levels and other specifications depends on periodic assessments of the status of groundfish stocks and a report from an established assessment review body or, in the Council parlance, a Stock Assessment Review (STAR) Panel. As appropriate, the Scientific and Statistical Committee (SSC) recommends the best available science for groundfish management decision-making in the Council process. The SSC reviews new assessments and STAR Panel reports and recommends the data and analyses that should be used to set groundfish harvest levels and other specifications for the following biennial management period.

Twenty-three groundfish stock assessments were recently prepared. Most of these have been reviewed by a STAR Panel and the SSC. Those assessments and STAR Panel reports under Council consideration at this meeting are included in a CD (Agenda Item F.8.a, Attachment 1). New assessments for English sole, starry flounder, vermilion rockfish, gopher rockfish, cowcod, California scorpionfish, Pacific ocean perch, darkblotched rockfish, and cabezon were reviewed by STAR Panels and then the SSC at their last meeting in June. The draft SSC report for these assessments is included as Agenda Item F.8.b, Attachment 1. The SSC will also review new assessments and STAR Panel reports for sablefish, Dover sole, shortspine thornyhead, longspine thornyhead, widow rockfish, bocaccio, blackgill rockfish, kelp greenling, canary rockfish, lingcod, yelloweye rockfish, and yellowtail rockfish at this meeting and will provide their recommendations for using these assessments in a supplemental report.

One legal question arising from the widow rockfish assessment the Council may wish to discuss is, if a new assessment for a stock under rebuilding indicates the stock was never overfished, but is not yet rebuilt to a biomass that can sustain a maximum yield, should the stock still be managed under the approved rebuilding plan? While the Council is not yet tasked with deciding harvest specifications based on these new assessments, guidance from NOAA General Counsel on this question will help the Groundfish Management Team and Groundfish Advisory Subpanel prepare their recommendations for the November Council meeting when this item is scheduled.

The Council should consider the new assessments and STAR Panel reports, as well as the advice of the SSC, other advisory bodies, and the public before adopting the new stock assessments for use in 2007-2008 groundfish management.

Council Action:

Approve Stock Assessments for 2007-2008 Groundfish Fisheries.

Reference Materials:

1. Agenda Item F.8.a, Attachment 1: CD copy of assessments and STAR Panel reports.
2. Agenda Item F.8.b, Attachment 1: Draft Scientific and Statistical Committee Report on Stock Assessments for 2007-2008 Groundfish Fisheries.
3. Agenda Item F.8.d, Public Comment: Canary Rockfish Project – Status Report from the Pacific Groundfish Conservation Trust, Inc.

Agenda Order:

- a. Agenda Item Overview
 - b. SSC Report
 - c. Reports and Comments of Advisory Bodies
 - d. Public Comment
 - e. **Council Action:** Approve Stock Assessments for 2007-2008 Groundfish Fisheries
- John DeVore
Kevin Hill

PFMC
09/01/05

MANAGEMENT SPECIFICATIONS FOR SPINY DOGFISH AND PACIFIC COD FOR 2006

The Groundfish Advisory Subpanel (GAP) supports the Groundfish Management Team's recommendations: Alternative 2 for spiny dogfish and Alternative 2 for Pacific cod. The GAP believes that these alternatives best restrain future increases in effort while providing ample access to current fishermen.

PFMC
09/20/05

GROUND FISH MANAGEMENT TEAM REPORT ON MANAGEMENT SPECIFICATIONS FOR SPINY DOGFISH AND PACIFIC COD FOR 2006

At the June Council meeting, based on recommendations from the Groundfish Management Team (GMT), the Council decided to include on its September agenda, consideration of setting an acceptable biological catch (ABC) and optimum yield (OY) for spiny dogfish, and management measures (i.e., trip limits) for both Pacific cod (which already has an OY) and dogfish. After further discussion, the GMT recommends that the setting of an ABC and OY for spiny dogfish be considered through the 2009-10 specifications process, following the completion and approval of a stock assessment in 2007, and that the Council only consider management measures for these two species for 2006 (and 2007-2008). The GMT notes that other species, such as California scorpionfish, have had trip limits in place prior to a formal assessment and the setting of an ABC and OY. Therefore, the GMT developed alternatives for management measures for Pacific cod and spiny dogfish for the Council's consideration, which would be effective in 2006. The GMT would like to stress that, once adopted, changes to the trip limit amounts may be considered for 2007-2008, as well as through inseason adjustments.

Process and Timeline

It is our understanding that given the timing of the federal rule-making process, it is unlikely that measures would be in place for the January 1, 2006, start date of the fishing year. Therefore, the alternatives developed by the GMT all have an implementation date of March 1, 2006, which is the beginning of the second two-month cumulative period. The National Marine Fisheries Service and the Washington Department of Fish and Wildlife are preparing a draft Environmental Assessment (EA), which is tiered from the 2005-2006 specifications Environmental Impact Statement (EIS). The EA will include environmental and economic analyses of the alternatives selected by the Council for consideration.

Intersector Allocations

Because there is not a separate ABC and OY for spiny dogfish, and given that this species is targeted by all commercial sectors—limited entry and open access, and both trawl and fixed gear—the GMT is not proposing differential trip limits by sector. Rather, the trip limits across Alternatives 2 and 3 are the same for all commercial sectors in all periods.

While there is an OY for Pacific cod, the recent and historical landings are almost all trawl. A review of the 2000-2004 data indicates that a minimal trip limit (~ 1,000 lbs/2 months) would accommodate all of the limited entry and open access fixed gear landings; therefore, the trip limits for these sectors remain static across Alternatives 2 and 3. The GMT would like to note that these trip limits were developed to accommodate existing fisheries and are not intended to represent any long-term allocation among sectors.

Range of Alternatives

In general, the GMT's approach in developing the range of alternatives was to review the amount of fish needed to accommodate current harvest levels on a two-month cumulative basis. We did not structure alternatives to provide for higher harvest levels for future developing fisheries, as these proposals are for the 2006 fishing year only. If, in the future, there are markets and/or

gears developed to allow new, targeted fisheries, then the Council could consider liberalizing trip limits for different sectors, as appropriate.

In order to analyze a full range of alternatives, the GMT is using Alternative 1 (status quo), which is unlimited amounts of Pacific cod and dogfish, to represent the high end of the range.

The GMT did trip frequency analyses for both Pacific cod and dogfish using fish ticket data from the 2000-2004 fisheries. Alternative 2 in each case represents trip limits which would accommodate practically all of the commercial fishing activity that occurred during this timeframe. It is anticipated that, if participation in the directed Pacific cod fishery remains at the current level, these trip limits would result in approaching, but not exceeding, the Pacific cod OY. Given that spiny dogfish would remain under the “Other Fish” category and would not have a separate OY, it is anticipated that the trip limits under Alternative 2 would not result in exceeding the “Other Fish” OY. The GMT notes that the data reviewed include periods when the West Coast groundfish fisheries were not subject to rockfish conservation areas (RCAs); therefore, the resulting harvest levels in 2006 (with RCAs in place) may be lower due to the inaccessibility of these species by one or more gear groups.

Alternative 3, in each case, represents the more conservative end of the range and could be constraining on one or more fisheries. These alternatives would be the most likely to ensure that the Pacific cod and “Other Fish” OYs would not be exceeded inseason; however, these alternatives would not maximize utilization of these species. The GMT’s recommended alternatives are:

Spiny Dogfish

Table 1. Limited Entry Trawl; Limited Entry Fixed Gear; Open Access

	Alt 1 (status quo)	Alt 2	Alt 3
Period 1	Status quo – unlimited (rule effective March 1, 2006)		
Period 2	Unlimited	150,000 lbs/2 mo	150,000 lbs/2 mo
Period 3	Unlimited	150,000 lbs/2 mo	150,000 lbs/2 mo
Period 4	Unlimited	100,000 lbs/2 mo	80,000 lbs/2 mo
Period 5	Unlimited	100,000 lbs/2 mo	80,000 lbs/2 mo
Period 6	Unlimited	100,000 lbs/2 mo	80,000 lbs/2 mo

Pacific Cod

Table 2. Limited Entry Trawl

	Alt 1 (status quo)	Alt 2	Alt 3
Period 1	Status quo – unlimited (rule effective March 1, 2006)		
Period 2	Unlimited	30,000 lbs/2 mo	30,000 lbs/2 mo
Period 3	Unlimited	70,000 lbs/2 mo	70,000 lbs/2 mo
Period 4	Unlimited	70,000 lbs/2 mo	70,000 lbs/2 mo
Period 5	Unlimited	70,000 lbs/2 mo	45,000 lbs/2 mo
Period 6	Unlimited	30,000 lbs/2 mo	30,000 lbs/2 mo

Table 3. Limited Entry Fixed Gear and Open Access

	Alt 1 (status quo)	Alt 2	Alt 3
Period 1	Status quo – unlimited (rule effective March 1, 2006)		
Period 2	Unlimited	1,000 lbs/2 mo	1,000 lbs/2 mo
Period 3	Unlimited	1,000 lbs/2 mo	1,000 lbs/2 mo
Period 4	Unlimited	1,000 lbs/2 mo	1,000 lbs/2 mo
Period 5	Unlimited	1,000 lbs/2 mo	1,000 lbs/2 mo
Period 6	Unlimited	1,000 lbs/2 mo	1,000 lbs/2 mo

Analysis of Alternatives

As noted in the Situation Summary, setting management measures for spiny dogfish and Pacific cod proactively addresses unanticipated participants in the open access fisheries, and the estimated amounts of targeted species harvest and potential bycatch of overfished rockfish. This concern is currently addressed through bycatch caps on canary and yelloweye rockfish that were established for the open access sector through emergency rule. If the Council ultimately decides to implement trip limits for spiny dogfish and Pacific cod for 2006, then the GMT would recommend that the bycatch caps for canary and yelloweye for the open access sector not be extended into 2006.

GMT Recommendations

1. Approve the management measure alternatives listed for spiny dogfish and Pacific cod for public review, with final adoption scheduled for the November Council meeting.
2. Defer the consideration of setting specifications (ABC and OY) for spiny dogfish until the 2009-2010 management cycle, following approval of a formal assessment in 2007.

PFGC
09/20/05

MANAGEMENT SPECIFICATIONS FOR SPINY DOGFISH AND PACIFIC COD FOR 2006

The Groundfish Management Team (GMT) has recently raised concerns regarding the management of two West Coast groundfish species managed under the Groundfish Fishery Management Plan-spiny dogfish and Pacific cod. The GMT believes current harvest controls are inadequate to effectively manage these species and recommends Council consideration of harvest specifications and/or management measures for 2006 fisheries.

Spiny Dogfish

Spiny dogfish is an important species to West Coast groundfish fisheries, primarily off the Washington coast, and fishermen and processors have worked aggressively to develop and maintain strong markets for this species. A number of trawl and longline fishermen and at least one major processor are heavily dependent upon spiny dogfish.

In recent years, fishermen targeting dogfish have been constrained by their assumed bycatch of yelloweye and canary rockfish, two overfished species managed under rebuilding plans. To provide protection for these overfished stocks, seasonally-variable and gear-specific closed areas, or rockfish conservation areas (RCAs), have been implemented. The RCAs off the Washington coast generally encompass the area between 100-200 fm for trawl gears and 0-100 fm for limited entry and open access fixed gears. The spiny dogfish fishery occurs around the 100-fm isobath, and dogfish are targeted by both trawl and non-trawl gears.

Since effort is not limited, especially in the open access fishery, there is a potential to overharvest dogfish and/or exceed the projected bycatch associated with the fishery, even with the RCAs in place. To address the potential of exceeding the estimated amounts of canary and yelloweye rockfish bycatch, which was anticipated for the open access fishery in 2005, the National Marine Fisheries Service (NMFS) adopted an emergency rule in early May to set bycatch limits for the directed groundfish open access fishery. These limits were originally set at 1.0 mt for canary rockfish and 0.6 mt for yelloweye rockfish, and subsequently raised inseason to 3.0 mt of each species, based on updated projections using NMFS West Coast Groundfish Observer Program data.

A formal stock assessment for West Coast dogfish has not yet been conducted, but one is recommended for the next assessment cycle (2007). Even in the absence of a formal assessment, life history information (slow growing, late maturing, and low fecundity) indicates spiny dogfish are easily overfished. Dogfish populations have been depressed as a result of fishing in areas of Puget Sound and have been declared overfished on the East Coast.

Spiny dogfish are currently included in the optimum yield (OY) for "Other Fish" in the management specifications for the West Coast groundfish fishery. Given the life history characteristics of dogfish and their status in other areas, the GMT recommended that the Council consider adopting a separate OY for dogfish along with harvest control regulations (i.e., trip

limits), beginning in 2006. If the Council agrees with this recommendation, then a draft environmental assessment (EA), tiered off the environmental impact statement used to analyze the 2005-2006 harvest specifications and management measures, will be prepared for final Council consideration in November. The Council task at this meeting is to consider adopting recommended 2006 spiny dogfish harvest specifications and management measures for public review.

Pacific Cod

Pacific cod is a transboundary stock with most of the biomass distributed north of the U.S.-Canada border. They are harvested primarily in the limited entry trawl fishery north of 40°10' N latitude. Pacific cod have never been formally assessed on the U.S. West Coast. The allowable biological catch (ABC) is based on catch history and the OY was set, beginning in 2005, at half the ABC based on the Council policy for specifying harvest limits for unassessed stocks. However, management measures such as trip limits have never been specified for this stock. This is a potential management problem given stock conservation concerns in Canada and recent high harvests in U.S. waters (the 2004 harvest approached the 2005 OY off the West Coast).

The GMT has recently requested tracking of Pacific cod total catches on the PacFIN Quota Species Monitoring (QSM) reporting system, which is expected to begin in January 2006. While this will aid the GMT, industry, and Council in tracking Pacific cod catches inseason next year, the Council may want to consider specifying a bimonthly trawl trip limit for Pacific cod to prevent early OY attainment. If the Council decides to specify a Pacific cod trip limit for the 2006 trawl fishery, then a tiered EA will be prepared in time for the final Council decision in November. The Council task at this meeting is to consider adopting recommended 2006 Pacific cod management measures for public review.

Council Action:

- 1. Consider Adopting 2006 Spiny Dogfish Harvest Specifications and Management Measures for Public Review.**
- 2. Consider Adopting 2006 Pacific Cod Management Measures for Public Review.**

Reference Materials: None.

Agenda Order:

- a. Agenda Item Overview
- b. Reports and Comments of Advisory Bodies
- c. Public Comment
- d. **Council Action:** Determine and Adopt 2006 Harvest Specifications (OY and ABC) and Management Measures for Public Review

John DeVore

PFMC
08/23/05