


MEMORANDUM

TO: Council, SSC and AP Members
FROM: Clarence G. Pautzke 
Executive Director
DATE: November 30, 1993
SUBJECT: Gulf of Alaska Groundfish

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| ESTIMATED TIME 8 HOURS (Total for all D-3 items) |
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ACTION REQUIRED

- (a) Review 1994 Final Stock Assessment and Fishery Evaluation (SAFE) document.
- (b) Set final 1994 Acceptable Biological Catch (ABC) limits and Total Allowable Catch (TAC) limits for all groundfish; set final 1994 Prohibited Species Catch (PSC) limits for halibut.

BACKGROUND

SAFE Document

The groundfish Plan Teams met November 15-19, 1993 in Seattle and prepared the final SAFE document provided at this meeting. This SAFE forms the basis for final groundfish specifications for the 1994 fishing year. Many individual species or species complex stock assessments contained in this SAFE have been updated. Information from the 1993 bottom trawl survey was not available in time for the Plan Team meeting, however.

The final SAFE for the Gulf of Alaska contains the Plan Team's estimates of biomass and ABCs for all groundfish species covered under the Gulf FMP and information concerning bycatch of halibut to provide guidance to the Council in establishing PSC apportionments. The attached tables from the SAFE lists the 1993 ABCs, TACs, and catches to date, and the Plan Team's recommended ABCs and corresponding overfishing levels for each of the species or species complexes. None of the Plan Team's recommended ABCs exceeds the overfishing level.

Set Final ABCs, TACs, and Apportionments for the 1994 Fisheries

The Council will approve final 1994 specifications this week. Twenty-five percent of the initial specifications set in September will be used to control the fisheries until the final specifications are published in the *Federal Register*, sometime in early 1994.

For Pacific Ocean Perch (POP), the specification procedure was set with the adoption of the Council's POP Rebuilding Policy (Amendment 32). Under that policy, the TAC for POP is based on a fishing mortality rate that is halfway between the optimal rate and the rate estimated to supply unavoidable bycatch, which is then adjusted by the ratio of current to target female spawning biomass. When this rate is applied to the Plan Team's estimate of exploitable biomass, the resulting TAC for

POP for the 1994 fishery is 2,550 mt. Amendment 32 also requires that the overfishing level (OFL) for POP be specified by regulatory area, based on trawl survey biomass distribution.

Set Final PSC Limits for Halibut

The PSC limits for halibut in the Gulf of Alaska are set by gear type and may be apportioned seasonally (Amendment 21). In recommending any seasonal allocations, the Council will consider its objective to promote harvest of as much of the groundfish optimum yield as possible with a given amount of halibut PSC.

During 1993 halibut PSC mortality applied only to the bottom trawl fisheries and to the hook-and-line fisheries. The midwater trawl fishery (targeting on pollock) has been exempt from bycatch-related closures. The developing pot fishery (primarily for Pacific cod) was exempted from the 1993 fixed gear PSC limit due to minimal bycatch mortality in that fishery.

For 1994 initial PSC limits, the Council recommended continuing the 1993 halibut PSC apportionments for the Gulf of Alaska groundfish fisheries, including exemptions for the midwater pollock and developing pot fisheries:

| Trawl gear | | Hook and Line gear | |
|-------------|--------------|--------------------|----------------|
| 1st quarter | 600 mt (30%) | 1st trimester | 200 mt (26.7%) |
| 2nd quarter | 400 mt (20%) | 2nd trimester | 500 mt (66.7%) |
| 3rd quarter | 600 mt (30%) | 3rd trimester | 50 mt (6.7%) |
| 4th quarter | 400 mt (20%) | | |
| <hr/> | | <hr/> | |
| TOTAL | 2000 mt | | 750 mt |

Of the 50 mt, 3rd trimester hook and line gear apportionment, 10 mt would be assigned specifically to the demersal shelf rockfish fishery in Southeast Alaska.

In September, the Council initiated a regulatory amendment for the GOA which would provide the mechanism to further apportion the trawl cap by specific fishery. Currently, it is a Gulf-wide cap which applies to all bottom trawling, regardless of target species. NMFS is proceeding with this action and it should be in place in time for making that apportionment for the 1994 fisheries. Future modifications to the apportionments would be made during the annual specifications process.

Once the amendment is in place, apportionments of the overall cap may be made to a 'Shallow water complex' and a 'Deep water complex'. Species in the shallow water complex are: pollock, Pacific cod, shallow water flatfish, Atka mackerel, and other species. Deep water complex species include: deep water flatfish, rockfish, flathead sole, sablefish, and arrowtooth flounder. The following apportionments are proposed for 1994:

| <u>Quarter</u> | <u>Shallow Complex</u> | <u>Deepwater Complex</u> | <u>Total</u> |
|----------------|----------------------------|------------------------------|--------------|
| 1 | 500 mt | 100 mt | 600 mt |
| 2 | 100 mt | 300 mt | 400 mt |
| 3 | 200 mt | 400 mt | 600 mt |
| 4 | No apportionment | | 400 mt |

Halibut Discard Mortality Rates

The Council may make recommendations to NMFS regarding discard mortality rates to be used for calculating halibut mortality by gear type in 1994. Results of the 1992 and preliminary 1993 viability studies for GOA and BSAI fisheries are detailed in the SAFE Appendix. Preseason discard mortality rates for 1994 were estimated by examining the 1990-1992 average mortality rates and the rates used in 1993. If the 1990-1992 average mortality rates differed from the 1993 rate by more than 5%, the 1994 recommendation was changed to the average rate rounded to the nearest 5%. For GOA fisheries, the report authors recommended a single rate of 15% for all hook and line fisheries in 1994, until more data are evaluated. A single rate of 10% was recommended for GOA pot gear. The following rates were recommended for GOA trawl fisheries:

| | |
|------------------|---------------------|
| MWT Pollock | 70% (down from 75%) |
| BT Pollock | 65% (up from 60%) |
| Rockfish | 65% (up from 55%) |
| Shallow Flatfish | 60% (no change) |
| Other Species | 60% (no change) |
| Pacific Cod | 55% (no change) |
| Deep Flatfish | 55% (no change) |

Table 1. Groundfish maximum sustainable yields (MSYs), 1993 and 1994 ABCs, 1993 TACs, and 1993 catches through October 30, 1993.

| Species | MSY (mt) | | ABC (mt) | | 1993 TAC | 1993 Catch |
|--|----------|--------------|-----------|---------|-------------|---------------|
| | | | 1993 | 1994 | | |
| Pollock | Unknown | W(61) | 34,068 | 22,130 | 24,087 | 20,274 |
| | | C(62) | 36,737 | 23,870 | 25,974 | 23,452 |
| | | C(63) | 86,195 | 56,000 | 60,939 | 61,990 |
| | | E | 3,400 | 7,300 | 3,400 | 689 |
| | | Total | 160,400 | 109,300 | 114,400 | 106,405 |
| Pacific cod | Unknown | W | 18,700 | 16,630 | 18,700 | 18,398 |
| | | C | 35,200 | 31,250 | 35,200 | 35,029 |
| | | E | 2,800 | 2,520 | 2,800 | 1,621 |
| | | Total | 56,700 | 50,400 | 56,700 | 55,048 |
| Flatfish ¹ (deep water) | unknown | W | 2,020 | 460 | 1,740 | 371 |
| | | C | 35,580 | 12,930 | 15,000 | 5,612 |
| | | E | 7,930 | 3,120 | 3,000 | 126 |
| | | Total | 45,530 | 16,510 | 19,740 | 6,109 |
| Rex sole ² | unknown | W | included | 800 | included | |
| | | C | in | 9,310 | in | |
| | | E | deepwater | 1,840 | deepwater | |
| | | Total | flatfish | 11,950 | flatfish | |
| Flatfish ³ (shallow water) | unknown | W | 27,480 | 20,290 | 4,500 | 378 |
| | | C | 21,260 | 12,950 | 10,000 | 6,302 |
| | | E | 1,740 | 1,180 | 1,740 | 6 |
| | | Total | 50,480 | 34,420 | 16,240 | 6,686 |
| Flathead sole | unknown | W | 12,580 | 9,120 | 2,000 | 581 |
| | | C | 31,830 | 23,080 | 5,000 | 1,864 |
| | | E | 5,040 | 3,650 | 3,000 | 8 |
| | | Total | 49,450 | 35,850 | 10,000 | 2,453 |
| Arrowtooth flounder | unknown | W | 38,880 | 28,590 | 5,000 | 1,790 |
| | | C | 253,330 | 186,270 | 20,000 | 15,663 |
| | | E | 29,080 | 21,380 | 5,000 | 957 |
| | | Total | 321,290 | 236,240 | 30,000 | 18,410 |
| Sablefish | 23,700 | W | 2,030 | 2,290 | 2,030 | 740 |
| | | C | 9,610 | 11,220 | 9,610 | 11,877 |
| | | WY | 3,830 | 4,850 | 3,830 | 4,441 |
| | | SEO | 5,430 | 7,140 | 5,430 | 5,357 |
| | | Total | 20,900 | 25,500 | 20,900 | 22,415 |
| Slope rockfish (other) | Unknown | W | 330 | 330 | 214 | 313 |
| | | C | 1,640 | 1,640 | 1,064 | 1,493 |
| | | E | 6,330 | 6,330 | 4,105 | 1,003 |
| | | Total | 8,300 | 8,300 | 5,383 | 2,809 |
| Northern Rockfish | Unknown | W | 1,000 | 1,000 | 1,000 | 902 |
| | | C | 4,720 | 4,720 | 4,720 | 3,862 |
| | | E | 40 | 40 | 40 | 115 |
| | | Total | 5,760 | 5,760 | 5,760 | 4,879 |
| Pacific Ocean Perch | Unknown | W | 753 | 680 | 341 | 474 |
| | | C | 949 | 850 | 949 | 1,078 |
| | | E | 1,676 | 1,500 | 1,270 | 283 |
| | | Total | 3,378 | 3,030 | 2,560 | 1,835 |

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Table 1. (continued)

| Species | MSY (mt) | ABC (mt) | | 1993 TAC | 1993 Catch | |
|----------------------------|----------------|--------------|-------------------------|---------------|-------------------------|--------------------|
| | | 1993 | 1994 | | | |
| Shortraker/Rougheye | W | 100 | 100 | 90 | 84 | |
| | Unknown | C | 1,290 | 1,290 | 1,161 | 1,169 |
| | | E | 570 | 570 | 513 | 609 |
| | | Total | 1,960 | 1,960 | 1,764 | 1,862 |
| Pelagic shelf rockfish | W | 1,010 | 1,030 | 1,010 | 231 | |
| | Unknown | C | 4,450 | 4,550 | 4,450 | 2,081 |
| | | E | 1,280 | 1,310 | 1,280 | 824 |
| | | Total | 6,740 | 6,890 | 6,740 | 3,136 |
| Demersal shelf rockfish | SEO Unknown | 800 | 960 | 800 | 671 ⁴ | |
| Atka mackerel | Unknown | GW | included in other | 4,800 | included in other | 6,993 ⁵ |
| Thornyhead rockfish | Unknown | GW | 1,180 | 1,180 | 1,062 | 1,348 |
| Other species | W | NA | NA | 3,053 | 5,556 | |
| | C | NA | NA | 9,721 | 5,562 | |
| | E | NA | NA | 1,828 | 703 | |
| | Total | | | 14,602 | 11,821 | |
| Totals | | | 732,868 | 553,040 | 306,651 | 221,809 |

- 1/ Shelikof Strait pollock is included within the W/C ABC range.
- 2/ "Deep water flatfish" means rex sole, Dover sole, and Greenland turbot in 1993. In 1994 rex sole is a separate target category.
- 3/ "Shallow water flatfish" means rock sole, yellowfin sole, butter sole, starry flounder, and other flatfish not specifically defined.
- 4/ Demersal Shelf rockfish catch includes 250 mt of unreported mortality from halibut fisheries.
- 5/ Catch of Atka mackerel is 6,993 mt.

NOTE: GW means Gulfwide
 ABCs are rounded to nearest 10.
 Catch data source: NMFS Blend Reports.
 Northern Rockfish were separated from Slope Rockfish in 1993.
 Atka mackerel will be separated from "other species" in 1994.

Table 2. Exploitable biomasses, 1994 ABCs, and estimated trends and abundances of groundfish.

| Species | Exploitable Biomass (mt) | ----- 1994 ----- | | Abundance, Trend | | |
|-----------------------------|--------------------------|------------------|-------------------|------------------|----------------------------|----------------|
| | | ABC | Overfishing Level | | | |
| Pollock | 726,000 ¹ | { W(61) | 22,130 } | 230,000 | Low, declining | |
| | | { C(62) | 23,870 } | | | |
| | | { C(63) | 56,000 } | | | |
| | | E | 7,300 | | | 16,400 |
| | | Total | 109,300 | | | 246,400 |
| Pacific cod | 296,000 | W | 16,630 | 71,100 | Low, declining | |
| | | C | 31,250 | | | |
| | | E | 2,520 | | | |
| | | Total | 50,400 | | | |
| Flatfish (deep water) | 132,030 | W | 460 | 19,280 | High, stable | |
| | | C | 12,930 | | | |
| | | E | 3,120 | | | |
| | | Total | 16,510 | | | |
| Rex sole | 95,630 | W | 800 | 13,960 | High, Stable | |
| | | C | 9,310 | | | |
| | | E | 1,840 | | | |
| | | Total | 11,950 | | | |
| Flatfish (shallow water) | 261,720 | W | 20,290 | 44,670 | High, stable | |
| | | C | 12,950 | | | |
| | | E | 1,180 | | | |
| | | Total | 34,420 | | | |
| Flathead sole | 247,250 | W | 9,120 | 39,310 | High, stable | |
| | | C | 23,080 | | | |
| | | E | 3,650 | | | |
| | | Total | 35,850 | | | |
| Arrowtooth flounder | 1,889,920 | W | 28,590 | 275,930 | High, stable | |
| | | C | 186,270 | | | |
| | | E | 21,380 | | | |
| | | Total | 236,240 | | | |
| Sablefish | 218,000 | W | 2,290 | 31,700 | Medium, stable | |
| | | C | 11,220 | | | |
| | | WYK | 4,850 | | | |
| | | SEO | 7,140 | | | |
| | | Total | 25,500 | | | |
| Slope rockfish (Other) | 134,400 | W | 330 | 9,850 | Relative abundance unknown | |
| | | C | 1,640 | | | |
| | | E | 6,330 | | | |
| | | Total | 8,300 | | | |
| Northern Rockfish | 96,070 | W | 1,000 | 10,360 | Relative abundance unknown | |
| | | C | 4,720 | | | |
| | | E | 40 | | | |
| | | Total | 5,760 | | | |
| Pacific ocean Perch | 101,800 | W | 680 | 3,940 | Low, stable | |
| | | C | 850 | | | |
| | | E | 1,500 | | | |
| | | Total | 3,030 | | | |

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Table 2. (continued)

| Species | Exploitable Biomass (mt) | | ----- 1994 ----- | | Abundance, Trend |
|---|-----------------------------|--------------|------------------|----------------------|-----------------------------------|
| | | | ABC | Overfishing Level | |
| Shortraker/ Rougheye | 72,960 | W | 100 | | Low, stable |
| | | C | 1,290 | | |
| | | E | 570 | | |
| | | Total | 1,960 | 2,900 | |
| Pelagic shelf rockfish ² | 76,500 | W | 1,030 | | Relative abundance unknown |
| | | C | 4,550 | | |
| | | E | 1,310 | | |
| | | Total | 6,890 | 11,550 | |
| Demersal shelf rockfish (SE Outside district) | 49,280 | SEO | 960 | 1,680 | Low, stable |
| Atka mackerel | 32,100 | GW | 4,800 | 19,040 | Low, unknown ³ |
| Thornyhead rockfish | 26,210 | GW | 1,180 | 1,440 | Low, declining |
| Other species | NA | W | NA | | TAC = 5% of the sum of TACs |
| | | C | NA | | |
| | | E | NA | | |
| <u>$\Sigma = 4,455,870$</u> | | | | | |

- 1/ Biomass estimates includes only Western and Central Gulf areas.
 2/ Pelagic shelf rockfish for 1994 includes black rockfish
 3/ Based on historical catch data.

Note: ABCs and Overfishing are rounded to nearest 10.
 Overfishing is defined Gulf-wide.
 Northern Rockfish were separated from Slope Rockfish in 1993.
 Atka mackerel will be separate from "other species" in 1994.
 Rex sole was part of deepwater flatfish until 1994.