

Bull

THE OREGON GROUND FISH FISHERY AND ITS INVESTIGATION IN 1987

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I. REVIEW OF GROUND FISH PROGRAM

A. Activities in 1987

Monitoring of the groundfish fisheries and the resource continued much as in the past. Major emphasis continued on the dominant trawl fisheries, especially species composition of rockfish. A strong shrimp fishery in 1987 resulted in a substantial effort shift from groundfish to shrimp fishing in the April-October period. Good markets for groundfish continued throughout the year. Most activities remained fairly routine and unchanged in substance from previous years, however.

In 1987 we collected 1,044 biological samples, slightly more than the amount collected in 1986 (Table 1). Rockfish species composition samples accounted for two-thirds of the samples collected.

The Marine Finfish Program again monitored the new thresher shark drift gillnet fishery in 1987 much as was done in 1986. Because gill nets are a prohibited gear type the fishery was allowed to operate via State experimental fishing gear permits. There were 85 vessels permitted from both Oregon and Washington, of which only 29 actually landed thresher shark. Total three-state landings were 111 mt (dr wt) of which 46 mt were landed into Oregon ports, most of the remainder in Washington State under a coordinated inter-state program. A small amount of Pacific whiting was caught but not landed. Federal Experimental Fishing Permits approved by the Pacific Fishery Management Council were issued by NMFS to permittees validated by ODFW or WDF in 1987 for the first time to allow retention-sale of bycaught soupfin, dogfish and leopard sharks ("Groundfish" under the FMP). Permittees landed 253 soupfin shark (about 6 mt, dr wt) as a result.

Major analytical tasks started or completed in 1987 included a stock assessment of petrale sole in the INPFC Columbia and Vancouver area and a

Table 1. Number of biological samples collected by PMFC Area in 1987.

| Species ^{1/} | 2A | 2B | 2C | 3A | 3B | Total |
|-----------------------|----|-----|-----|-----|----|------------------|
| Dover sole | | 17 | 2 | 20 | | 39 |
| English sole | | | 1 | 17 | | 18 |
| Petrale sole | 1 | 7 | | 10 | | 18 |
| Rockfish | | | | | | |
| <u>S. alutus</u> | | | 7 | 12 | | 19 |
| <u>S. entomelas</u> | 1 | 14 | 39 | 49 | | 103 |
| <u>S. flavidus</u> | | 9 | 4 | 24 | | 37 |
| <u>S. pinniger</u> | | 11 | 6 | 18 | | 35 |
| Species composition | 18 | 179 | 248 | 233 | 20 | 698 |
| Subtotal | 20 | 237 | 307 | 383 | 20 | 967 |
| Sablefish | | | | | | 77 ^{2/} |
| TOTALS | | | | | | 1,044 |

^{1/} See Appendix 2 for a list of common and scientific names.

^{2/} INPFC Columbia area, n =74; INPFC Eureka area, n = 3.

draft report detailing trends in the fishery since implementation of the Magnuson Fishery Conservation and Management Act in 1976. We also completed an analysis of Dover sole tagging studies undertaken by ODFW since 1948.

Staff also participated in Pacific Fishery Management Council activities as members of the Groundfish Management Team, the Groundfish Select Group, the groundfish plan rewrite group, the Council's limited entry committee and the ad hoc stock assessment working group. A list of personnel is shown in Appendix 1.

B. Reports Completed or in Progress in 1987

Barss, W.H. and R.L. Demory. 1987. Results of Dover sole tagging projects conducted by the State of Oregon, 1948-75. Ore. Dept. Fish and Wildl. Information Report 88-2. 22 p.

Demory, R.L. 1987. Progress report on the status of petrale sole in the INPFC Columbia-Vancouver areas in 1987. In status of the Pacific Coast Groundfish Fishery through 1986 and recommended Acceptable Biological catches for 1988. Pacific Fishery Management Council. Portland, OR

Golden, J.T. 1987. Recent trends in the Oregon groundfish fishery: an analysis of effects of regulation under the Magnuson Fisheries Conservation and Management Act of 1976. Ore. Dept. Fish and Wildl. Manuscript. 82 p.

Pikitch, E.K. and R.L. Demory. Scales as a means of aging Dover sole (Microstomus pacificus) revisited. Submitted to Trans. Amer. Fish. Soc.

II. REVIEW OF 1987 FISHERY

A. Commercial Fisheries

1. Total Landing. The total landed catch of groundfish (excluding Pacific halibut) by commercial gear types in 1987 was 30,616 mt, 23% greater than the 24,899 mt landings of 1986 (Table 2). Most of the increase was attributable to the trawl fishery.

The trawl fishery accounted for 25,951 mt and represents 85% of the commercial landings. The 1987 trawl landing was 25% greater than 1986 landings and about 5% greater than the 10-year mean landing of 24,779 mt (Table 3).

Table 2. Oregon landed catch (mt) of groundfish by gear type in 1987^{1/}.

| Species | Trawl ^{2/} | Shrimp Trawl | Pot | Jig | Long Line | Troll | Other Gear ^{3/} | Recreational | Total |
|-------------------------|---------------------|-----------------|--------------|------------|--------------|-----------|-----------------------------|--------------|---------------|
| English sole | 594 | 1 | | | | | | | 595 |
| Rock sole | 1 | | | | | | | | 1 |
| Petrale sole | 852 | 3 | | | Tr | Tr | Tr | | 855 |
| Dover sole | 6,017 | 41 | Tr | | Tr | | | | 6,058 |
| Rex sole | 286 | 1 | | | | | | | 287 |
| Starry flounder | 91 | Tr | | Tr | Tr | Tr | Tr | Tr | 91 |
| Arrowtooth flounder | 725 | 11 | 2 | | 3 | Tr | Tr | | 741 |
| Other flatfish | 448 | 3 | Tr | Tr | Tr | Tr | Tr | 3 | 454 |
| Pacific cod | 641 | 16 | | | 2 | Tr | | | 659 |
| Lingcod | 559 | 30 | Tr | 28 | 41 | 21 | 41 | 57 | 777 |
| Sablefish | 2,520 | 29 | 1,689 | Tr | 1,002 | Tr | Tr | Tr | 5,240 |
| Rockfish (all species) | 13,020 | 993 | 13 | 115 | 394 | 60 | 110 | 252 | 14,957 |
| Misc. species | 21 | Tr | Tr | 3 | 5 | Tr | 2 | 15 | 46 |
| Dogfish (see misc. sp.) | | | | Tr | Tr | | | | Tr |
| Pacific whiting (hake) | 176 | 6 | | Tr | Tr | Tr | | Tr | 182 |
| Total | 25,951 | 1,134 | 1,704 | 146 | 1,448 | 80 | 153 | 327 | 30,943 |

Pacific halibut Tr 413 3 36 452

^{1/} See appendix 4 for commercial gear catch by international statistical area

^{2/} Includes midwater trawl

^{3/} Includes scallop dredge, other hook and line, and crab pots

Table 3. Oregon trawl landings (mt) of groundfish, total effort (hr) and CPUE (mt/hr), 1977-87. Landings include bottom and midwater trawl but exclude shrimp trawl.

| Species | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1977-86 Mean |
|------------------------|-------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|-----------------|
| English sole | 1,001 | 1,041 | 1,084 | 718 | 724 | 990 | 914 | 450 | 468 | 551 | 594 | 794 |
| Rock sole | 10 | 12 | 6 | 13 | 9 | 30 | 4 | 2 | 1 | 6 | 1 | 9 |
| Petrale sole | 822 | 1,000 | 1,040 | 850 | 880 | 1,504 | 1,105 | 688 | 577 | 707 | 852 | 917 |
| Dover sole | 1,818 | 3,374 | 5,066 | 4,008 | 5,228 | 8,083 | 8,459 | 6,103 | 5,695 | 4,770 | 6,017 | 5,260 |
| Rex sole | 425 | 642 | 734 | 524 | 606 | 841 | 645 | 549 | 397 | 285 | 286 | 565 |
| Starry flounder | 283 | 489 | 284 | 193 | 400 | 218 | 196 | 107 | 358 | 97 | 91 | 263 |
| Arrowtooth flounder | 87 | 170 | 319 | 188 | 588 | 721 | 534 | 416 | 688 | 478 | 725 | 419 |
| Other flatfish | 348 | 394 | 569 | 427 | 483 | 642 | 574 | 507 | 415 | 392 | 448 | 475 |
| Total flatfish | 4,794 | 7,122 | 9,102 | 6,921 | 8,918 | 13,029 | 12,431 | 8,822 | 8,599 | 7,286 | 9,014 | 8,702 |
| Pacific cod | 364 | 398 | 401 | 156 | 44 | 116 | 81 | 78 | 38 | 26 | 641 | 170 |
| Lingcod | 381 | 445 | 686 | 652 | 904 | 1,345 | 1,621 | 978 | 946 | 489 | 559 | 845 |
| Sablefish | 326 | 958 | 1,493 | 1,026 | 1,304 | 2,951 | 2,771 | 2,775 | 2,843 | 2,125 | 2,520 | 1,857 |
| Pacific ocean perch | 424 | 486 | 848 | 1,128 | 859 | 543 | 1,138 | 752 | 797 | 660 | 544 | 764 |
| Other rockfish | 2,398 | 4,388 | 8,450 | 15,354 | 22,699 | 19,587 | 13,865 | 11,713 | 11,676 | 9,827 | 12,476 | 11,996 |
| Misc. species | 153 | 185 | 187 | 92 | 197 | 45 | 98 | 58 | 7 | 9 | 21 | 103 |
| Dogfish | 122 | 56 | 40 | 23 | 5 | 1 | 1 | Tr | Tr | Tr | 0 | 25 |
| Minkfood | 85 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| Pacific whiting (hake) | 450 | 383 | 129 | 257 | 162 | 1 | 58 | 338 | 884 | 419 | 176 | 308 |
| Reduction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Landings | 9,497 | 14,424 | 21,336 | 25,609 | 35,092 | 37,618 | 32,064 | 25,514 | 25,790 | 20,841 | 25,951 | 24,779 |
| Hours, bottom trawl | 6,683 | 38,447 | 56,444 | 46,606 | 68,297 | 94,997 | 101,517 | 80,859 | 74,726 | 52,785 | 60,808 | 64,136 |
| Hours, pelagic trawl | - | - | - | - | - | - | - | 1,780 | 2,268 | 2,324 | 3,103 | - |
| CPUE, bottom trawl | 0.356 | 0.375 | 0.366 | 0.362 | 0.303 | 0.302 | 0.298 | 0.261 | 0.345 | 0.324 | 0.336 | 0.319 |
| CPUE, pelagic trawl | - | - | - | - | - | - | - | 2.459 | 1.889 | 1.604 | 1.786 | - |

Landed catch by other commercial gear types was 4,665 mt, an increase of about 15% over 1986. Pot, longline and shrimp trawl were most important and accounted for 37%, 31%, and 24%, respectively. Commercial hook and line (vertical H-L, jig) accounted for most of the rest. Sablefish was the principal species landed for pot and longline gear while rockfish dominated the landings of incidental catch by shrimp trawls. Commercial landings of Pacific halibut into Oregon ports were 416 mt, a substantial increase over 1986. About 91 mt (dr wt) were caught in IPHC Area 2A (Washington-Oregon-California) by longliners.

2. Trawl Landings of Major Species

a. Dover sole. Trawl landings of Dover sole were 6,017 mt, a 26% increase over 1986 and 14% greater than the 10-year mean. The major reason was strong markets throughout the year even though substantial trawl effort was directed towards the shrimp fishery. The areas of major production were PMFC areas 2B, 3A, and 2C (Appendix 4).

b. English sole. Trawl landings of English sole were 594 mt, an increase of 8% over 1986 but 34% less than the 10-yr mean.

c. Petrable sole. Trawl landings of petrale sole were 852 mt, an increase of 21% over 1986 but 8% less than the 10-year mean landing. PMFC areas 2B and 3A accounted for most of the landings.

d. Lingcod. Trawl landings of lingcod in 1987 were 559 mt, an increase of 14% over 1986 but 51% less than the 10-year mean. The 1987 landings, although improved, are still part of a declining trend that has persisted since 1984. PFMC areas 2B and 3A accounted for most of the landings.

e. Sablefish. Trawl landings of sablefish in 1987 were 2,520 mt, 19% greater than in 1986 and 26% greater than the 10-year mean. In early November, landings of sablefish were prohibited because the coastwide quota

had been reached. Discards are unknown at this time, but could have been substantial. Trip limits of 6,000 lbs or 20%, whichever was greater, were imposed on October 2, 1988 but were not effective in preventing prohibited species status.

f. Rockfish. Trawl landings of rockfish (all species) in 1987 were 13,020 mt, an increase of 20% from 1986 and 2% greater than the 10-year mean. Bottom trawl landings were 7,593 mt, while pelagic trawl landings were 5,427 mt. Areas 3A, 2C, and 2B accounted for most of the landings. Major species were widow rockfish, yellowtail rockfish, canary rockfish, darkblotched rockfish and thornyheads (Table 4).

g. Pacific cod. Pacific cod were notable in 1987. The trawl landings were 641 mt, a 25-fold increase over 1986 and a 4-fold increase over the 10-year mean. The 1987 catch represents the highest catch of record. In past years, PMFC area 3A accounted for nearly all the landings. In 1987, landings by area were 3A, 301 mt, area 2B, 175 mt and area 2C, 101 mt. The remainder was from areas 1C-2A and 3B.

B. Recreational Fisheries

The 1987 recreational fishery off Oregon resulted in a catch of 218,491 fish (Table 5), an 8% increase over the 1986 landings. The 1987 sampling periods for each port are also shown in Table 5.

The number of bottomfish-directed ocean angler trips in 1987 was 24,442, down slightly from the 26,153 that occurred in 1986. Charter boat anglers made 16,387 of these trips (67%), with private boat anglers contributing the rest. Bottomfish target anglers caught an average of 5.7 fish per trip; this is identical to the 1986 catch per angler trip.

Black rockfish (Sebastes melanops) was again the most numerous species in the catch, comprising 59% of the total (Table 6). Combined rockfish species accounted for 88% of the catch, the same as 1986.

Table 4. Trawl landings (mt) of rockfish by international statistical area in 1987.

| | 1C | 2A | 2B | 2C | 3A | 3B | 3C-S | Total |
|-------------------------------|----|-----|-------|-------|-------|-----|------|--------|
| <u>S. brevispinus</u> | 0 | 1 | 19 | 73 | 76 | 13 | 0 | 182 |
| <u>S. crameri</u> | 5 | 98 | 179 | 252 | 142 | 14 | 0 | 690 |
| <u>S. diploproa</u> | 1 | 9 | 31 | 67 | 27 | 1 | 0 | 136 |
| <u>S. flavidus</u> | 12 | 41 | 243 | 151 | 1,099 | 88 | 5 | 1,639 |
| <u>S. goodei</u> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <u>S. melanops</u> | 0 | 0 | Tr | Tr | 17 | 0 | 0 | 17 |
| <u>S. paucispinus</u> | Tr | 14 | 60 | 57 | 98 | 7 | 0 | 236 |
| <u>S. pinniger</u> | 0 | 60 | 547 | 372 | 384 | 56 | 0 | 1,419 |
| <u>S. proriger</u> | 0 | 2 | 87 | 28 | 126 | 3 | 0 | 246 |
| <u>S. reedi</u> | 0 | Tr | 17 | 170 | 43 | 4 | 0 | 234 |
| <u>S. ruberrimus</u> | 0 | 2 | 21 | 24 | 15 | 2 | 0 | 64 |
| <u>S. zacentrus</u> | 0 | 3 | 21 | 31 | 67 | 2 | 0 | 124 |
| <u>Other Sebastes</u> | Tr | 24 | 66 | 99 | 134 | 9 | 0 | 332 |
| <u>Total Sebastes Complex</u> | 18 | 254 | 1,291 | 1,324 | 2,228 | 199 | 5 | 5,319 |
| <u>S. alutus</u> | Tr | 7 | 17 | 196 | 271 | 27 | 25 | 544 |
| <u>S. entomelas</u> | 7 | 145 | 1,518 | 1,261 | 3,352 | 3 | 2 | 6,288 |
| <u>S. jordani</u> | 0 | 0 | Tr | 0 | Tr | 0 | 0 | Tr |
| Unspecified Rockfish | 4 | 1 | 26 | Tr | 3 | 4 | 137 | 176 |
| <u>Total Sebastolobus</u> | 9 | 125 | 271 | 163 | 95 | 23 | 6 | 692 |
| <u>Total All Rockfish</u> | 39 | 532 | 3,124 | 2,944 | 5,949 | 256 | 176 | 13,020 |

Rounding error = 2 mt when compared to Table 2 and Appendix 4.

Table 5. Estimated 1987 Oregon Recreational Catch by the Ocean Boat Fishery^{1/}

| Port | Rockfish | Flatfish | Lingcod | Misc | Total |
|------------------------------|----------|---------------------|---------|-------|---------|
| Astoria ^{2/} | 326 | 37 | 65 | 192 | 620 |
| Garibaldi ^{3/} | 48,110 | 210 | 3,067 | 757 | 52,144 |
| Pacific City ^{3/} | 4,162 | 133 | 672 | 138 | 5,105 |
| Depoe Bay ^{3/} | 25,750 | 111 | 2,010 | 1,856 | 29,727 |
| Newport ^{3/} | 36,362 | 4,133 ^{6/} | 4,051 | 2,162 | 46,708 |
| Florence ^{3/} | 402 | 77 | 1 | 44 | 524 |
| Winchester Bay ^{3/} | 343 | 139 | 24 | 80 | 586 |
| Coos Bay ^{3/} | 10,713 | 30 | 609 | 361 | 11,713 |
| Gold beach ^{4/} | 9,072 | 5 | 777 | 137 | 9,991 |
| Brookings ^{5/} | 56,872 | 380 | 2,523 | 1,598 | 61,373 |
| Total | 192,112 | 5,255 | 13,799 | 7,325 | 218,491 |

^{1/} Catch in numbers of fish

^{2/} Sampling period: June 29 through August 15

^{3/} Sampling period: June 13 through September 13

^{4/} Sampling period: May 23 through September 7

^{5/} Sampling period: May 23 through October 31

^{6/} Mostly Pacific halibut

Table 6. Species Composition of the 1987 Oregon Recreational Bottomfish Ocean Boat Fishery

| Species | Percent of catch | Number of fish | Total Weight (mt) |
|-----------------------------------|------------------|----------------|-------------------|
| <u>Sebastes melanops</u> | 58.9 | 128,733 | 169.9 |
| <u>S. flavidus</u> | 9.0 | 19,615 | 27.6 |
| <u>S. pinniger</u> | 7.7 | 16,789 | 24.1 |
| <u>Ophiodon elongatus</u> | 6.3 | 13,799 | 57.0 |
| <u>Sebastes mystinus</u> | 5.2 | 11,440 | 9.3 |
| <u>Sebastes spp</u> | 3.2 | 6,991 | 6.5 |
| <u>S. ruberrimus</u> | 2.9 | 6,304 | 13.9 |
| <u>Hippoglossus stenolepis</u> | 1.6 | 3,470 | 34.2 |
| <u>Scorpaenichthys marmoratus</u> | 1.4 | 3,047 | 6.7 |
| <u>Hexagrammos decagrammus</u> | 1.3 | 2,945 | 3.0 |
| <u>Sebastes nebulosus</u> | 1.0 | 2,240 | 1.1 |
| Other fish | 1.5 | 3,270 | 7.9 |
| Total | 100.0 | 218,491 | 361.2 |

In 1987, Pacific halibut (Hippoglossus stenolepis) was one of the top ten species landed, comprising only 1.6% of the total catch by numbers, but nearly 10% of the landed weight. An intensive survey of the recreational halibut fishery in Oregon resulted in a 1987 catch estimate of 4,393 fish for the total season, with a catch weight of 72,123 pounds (dressed-weight). Approximately 96% of this was caught out of Newport. Charter boat anglers caught 88% of the halibut, with private boat anglers contributing the remaining 12%. This fishery is rapidly expanding; only 35,000 lb were landed in Oregon in 1986, less than 2,000-8,000 lb annually before 1986 as bycatch.

PMFC area 2C produced 238 mt of recreationally caught fish, 66% of the state total (Table 7). This area includes the ports of Garibaldi, Newport, and Depoe Bay, that ranked second, third and fourth, respectively, in the state's landings.

Of black rockfish tagged in 1985, recoveries through 1987 totaled 142 for the fish tagged off Garibaldi and 80 for those tagged off Newport. The overall recovery rate was 2.9% (Table 8).

Movement patterns shown by recovered tags are somewhat ambiguous. The great majority of the recaptured fish were taken from sites near the area of release. However, a few fish showed significant movement; two fish from the Garibaldi tagging were recovered in 1987 off Westport, Washington, approximately 85 nautical miles (nm) north of the tagging areas. Two of the Newport-area tagged fish were also recovered in 1987 off Washington, one just north of the Columbia River (100 nm) and the other off Pt. Grenville (160 nm).

C. Canada-U.S. Domestic Groundfish Regulations - Oregon

Changes in trip limits for widow rockfish, Sebastes complex and sablefish occurred in response to recommendations made by the Pacific Fishery

Table 7. Estimated 1987 Oregon Recreational Bottomfish Catch (mt) by PMFC Area.

| | P M F C Area | | | | State Total |
|------------|--------------|------|-------|-----|--------------------|
| | 2A | 2B | 2C | 3A | |
| Lingcod | 13.6 | 2.6 | 40.5 | 0.3 | 57.0 |
| Rockfish | 86.6 | 15.0 | 150.4 | 0.4 | 252.4 |
| Flatfish | 0.6 | 0.4 | 37.5 | Tr | 38.5 ^{1/} |
| Other Fish | 3.5 | 1.0 | 9.8 | 0.4 | 14.7 |
| Total | 104.3 | 19.0 | 238.2 | 1.1 | 362.6 |

^{1/} Includes Pacific halibut

Table 8. Annual and total tag recoveries by tagging area and recovery area for 1985 black rockfish study.

| | Tag release area | | |
|--|------------------|---------|-------|
| | Garibaldi | Newport | Total |
| Number of fish tagged | 3,850 | 3,908 | 7,763 |
| Number of tags recovered | 142 | 80 | 222 |
| Recoveries in: | | | |
| 1985 | 114 | 40 | 154 |
| 1986 | 16 | 22 | 38 |
| 1987 | 12 | 18 | 30 |
| Distance from tagging site to recovery area (% of recoveries): | | | |
| < 10 nm | 97.8% | 95.0% | 96.8% |
| 10-50 nm | 0.7% | 0.0% | 0.0% |
| 50-100 nm | 1.4% | 0.0% | 0.9% |
| > 100 nm | 0.0% | 5.0% | 1.8% |

Management Council. Trawl trip limits were also implemented in-season for sablefish to prolong the season. A listing of recommended changes is shown in Appendix 3.

The Oregon Department of Fish and Wildlife added a 30-inch (T.L.) minimum size limit for halibut in the recreational fishery to match Area 2A regulations adopted by the International Pacific Halibut Commission.

III. GROUND FISH RESEARCH

A. Stock Assessments

The only new stock assessment undertaken in 1987 was for petrale sole. This assessment was undertaken on short notice in response to concerns by a group of Washington trawlers. Results of the analysis showed that current levels of exploitation rate were relatively high, 0.34 in PMFC areas 2B-3B and 0.45 in PMFC area 3C. The exploitation rate in area 3C was considered to be of low reliability. Time constraints precluded a detailed analysis.

B. Related Studies

Field and laboratory work on retention studies on Dover, English and petrale sole and sablefish was concluded on December 31, 1987. This work was part of the OSU Sea Grant/ODFW project, "Biological Risks and Economic Consequences of Alternative Management Strategies".

IV. FISHERY ASSESSMENT

There were 141 trawl vessels that delivered groundfish into Oregon ports in 1987 compared to 130 in 1986. The number of deliveries was 2,786 and 2,247, respectively (Table 9).

The number of vessels also increased for other gear types. The number of shrimp trawlers increased from 152 in 1986 to 181 in 1987 in response to good prices and above average shrimp quality. Vessels using hook and line gear (excluding traditional longline) increased from 211 in 1986 to 311 in 1987.

Table 9. Number of vessels by gear type, fishing for groundfish and shrimp and landing in Oregon in 1986 and 1987.

| Gear Type | 1986 | | 1987 | |
|-----------------------------------|--------|------------|--------|------------|
| | Number | Deliveries | Number | Deliveries |
| Other Hook and Line ^{1/} | 211 | 2,008 | 311 | 1,871 |
| Longline ^{2/} | 37 | 359 | 49 | 369 |
| Trawl ^{3/} | | | | |
| Bottom | 123 | 2,247 | 136 | 2,786 |
| Midwater | 25 | 321 | 33 | 465 |
| Total | 130 | 3,568 | 141 | 3,251 |
| Pot | 16 | 304 | 21 | 326 |
| Shrimp trawl | 152 | 2,324 | 181 | 2,923 |

^{1/} Includes jig, longbar, and vertical longline

^{2/} Excludes Pacific halibut

^{3/} Most midwater trawl vessels also make bottom trawl landings, thus vessel classes are not additive.

Vertical hook and line, also called "Portuguese longline" was the major part of this gear type.

APPENDIX 1

MARINE FINFISH PROGRAM

| | |
|---|------------|
| Jack Robinson, Program Leader | Newport |
| Ellen Pikitch, Consultant (0.5 FTE) | Newport |
| Clay Creech, Consultant (0.25 FTE) | Newport |
| Jim Golden, Project Leader, Management | Newport |
| Dave Douglas, 1 Biologist | Astoria |
| Michael Hosie, Biologist | Charleston |
| Gary Hettman, Technician | Newport |
| Suzanne Rock, Administrative Assistant | Newport |
| Kathy Raymond (0.5 FTE), EBA 1 | Newport |
| Robert Demory, Project Leader, Resource Assessment | Newport |
| William Barss, Biologist | Newport |
| Jerry Butler, Project Leader, Sportfish/Baitfish | Newport |
| Elaine Stewart, Biologist | Tillamook |
| Carol Madden, Technician | Newport |
| Phyllis Shelly, Biologist | Charleston |
| Larry Hreha, Pelagic Fish/Laboratory Head, Member North Pacific Fishery Management Council SSC | Astoria |

Appendix 2. Common and scientific names of species reported in the groundfish catch.

ROCKFISH

| | |
|------------------------|---------------------------|
| Aurora rockfish | <u>Sebastes aurora</u> |
| Bank rockfish | <u>S. rufus</u> |
| Black rockfish | <u>S. melanops</u> |
| Blackgill rockfish | <u>S. melanostomus</u> |
| Blue rockfish | <u>S. mystinus</u> |
| Bocaccio rockfish | <u>S. paucispinis</u> |
| Canary rockfish | <u>S. piniger</u> |
| Chilipepper | <u>S. goodei</u> |
| China rockfish | <u>S. nebulosus</u> |
| Dark-blotched rockfish | <u>S. crameri</u> |
| Greenspotted rockfish | <u>S. chlorostictus</u> |
| Greenstriped rockfish | <u>S. elongatus</u> |
| Longspine thornyhead | <u>Sebastes altivelis</u> |
| Pacific ocean perch | <u>S. alutus</u> |
| Pygmy rockfish | <u>S. wilsoni</u> |
| Quillback rockfish | <u>S. maliger</u> |
| Redbanded rockfish | <u>S. badcocki</u> |
| Redstripe rockfish | <u>S. proriger</u> |
| Rosethorn rockfish | <u>S. helvomaculatus</u> |
| Rougheye rockfish | <u>S. aleutianus</u> |
| Sharpchin rockfish | <u>S. zacentrus</u> |
| Shortbelly rockfish | <u>S. jordani</u> |
| Shortraker rockfish | <u>S. borealis</u> |
| Shortspine thornyhead | <u>Sebastes alascanus</u> |
| Silvergray rockfish | <u>S. brevispinis</u> |
| Speckled rockfish | <u>S. ovalis</u> |
| Splitnose rockfish | <u>S. diploproa</u> |
| Stripetail rockfish | <u>S. saxicola</u> |
| Tiger rockfish | <u>S. nigrocinctus</u> |
| Vermilion rockfish | <u>S. miniatus</u> |
| Widow rockfish | <u>S. entomeias</u> |
| Yelloweye rockfish | <u>S. ruberrimus</u> |
| Yellowmouth rockfish | <u>S. reedi</u> |
| Yellowtail rockfish | <u>S. flavidus</u> |

FLATFISH

| | |
|---------------------|-----------------------------------|
| Arrowtooth flounder | <u>Artheresthes stomias</u> |
| Butter sole | <u>Isopsetta isolepis</u> |
| Curlfin turbot | <u>Pleuronichthys decurrens</u> |
| Dover sole | <u>Microstomus pacificus</u> |
| English sole | <u>Parophrys vetulus</u> |
| Flathead sole | <u>Hippoglossoides elassodon</u> |
| Pacific halibut | <u>Hippoglossus stenolepis</u> |
| Pacific sanddab | <u>Citharichthys sordidus</u> |
| Petrale sole | <u>Eopsetta jordani</u> |
| Rex sole | <u>Glyptocephalus zachirus</u> |
| Rock sole | <u>Lepidopsetta bilineata</u> |
| Sand sole | <u>Psettichthys melanostictus</u> |
| Slender sole | <u>Lyopsetta exilis</u> |
| Starry flounder | <u>Platichthys stellatus</u> |

OTHER FISH

| | |
|-----------------|-----------------------------------|
| Cabezon | <u>Scorpaenichthys marmoratus</u> |
| Green sturgeon | <u>Acidenser medirostris</u> |
| Pacific cod | <u>Gadus macrocephalus</u> |
| Pacific whiting | <u>Merluccius productus</u> |
| Lingcod | <u>Opniodon elongatus</u> |
| Sablefish | <u>Anodiodoma fimbria</u> |
| Skates | <u>Raja spp.</u> |
| Souppin shark | <u>Galeorninus zyopterus</u> |
| Spiny dogfish | <u>Squalus acanthias</u> |

Appendix 3. Regulations recommended by the Pacific Fishery Management Council and subsequently adopted by the Oregon Department of Fish and Wildlife in 1987.

Effective January 1, 1987

- Recommended a coastwide widow rockfish trip limit of 30,000 pounds per week with no biweekly option. Only one landing per week above 3,000 pounds (coastwide OY = 12,500 mt; ABC = 12,100 mt).
- HG for Sebastes complex north of Coos Bay, Oregon (43°21'34"N) fixed at 10,200 mt.
- For Sebastes complex north of Coos Bay: recommended 25,000 pounds weekly trip limit of which no more than 10,000 pounds may be yellowtail rockfish (or 50,000 pounds biweekly of which no more than 20,000 pounds may be yellowtail rockfish; or 12,500 pounds twice per week, of which no more than 5,000 pound may be yellowtail rockfish--biweekly and twice weekly landings require appropriate declaration to state in which fish are landed).
- For Sebastes complex south of Coos Bay: recommended 40,000 pound trip limit; no trip frequency limit.
- Recommended landings of Sebastes complex and widow rockfish be unrestricted if less than 3,000 pounds.
- Recommended allocating the sablefish OY between trawl and fixed gear at 52 (6,200 mt) and 48 percent (5,800 mt), respectively; if the quota for either gear type is reached, sablefish becomes a prohibited species for that gear; coastwide OY, ABC = 12,000 mt.
- Recommended 5,000 pound trawl and 100 pound fixed gear trip limits (round weight) for sablefish smaller than 22 inches total length (16 inches dorsal total length) and apply coastwide.
- Recommended the coastwide Pacific oceanperch limit should be 20 percent of all legal fish on board or 10,000 pounds whichever is less (in round weight); landings of Pacific ocean perch unrestricted if less than 1,000 pounds regardless of percentage on board; Vancouver Area OY = 500 mt; Columbia Area OY = 800 mt.
- Recommended an ABC and OY of 195,000 mt for Pacific whiting.
- Recommended an ABC of 4,000 mt for yellowtail rockfish.

Effective April 5, 1987

- Recommended that the size limit of processed sablefish be changed to 15.5 inches (dorsal total length).

Effective April 27, 1987

- Recommended that the trip limit for sablefish smaller than 22 inches (total length) caught by fixed gear be increased from 100 pound to 1,500 pounds coastwide.

Effective May 3, 1987

- Recommended changing the definition of fishing week from Sunday through Saturday to Wednesday through Tuesday for Sebastes complex and widow rockfish.

Effective July 22, 1987

- Recommended that the weekly trip limit for yellowtail rockfish caught north of Coos Bay should be decreased to 7,500 pounds (15,000 pounds biweekly; or 3,750 pounds twice weekly).

Effective August 14, 1987

- Coastwide ABCs for widow and chilipepper rockfish increased to 12,500 mt and 3,600 mt, respectively.

Effective October 2, 1987

- Recommended that the trawl trip limit for sablefish should be 6,000 pounds or 20 percent of the legal fish on board, whichever is greater, including fish under 22 inches. Trip limits for fish under 22 inches remained in effect.

Effective October 21, 1987

- Fixed gear sablefish quota reached; fixed gear fishery closed.

Effective October 22, 1987

- Recommended that the weekly trip limit for widow rockfish be reduced from 30,000 pounds when 95 percent of the widow rockfish OY is projected to be reached (i.e. at 11,875 mt).

Effective November 4, 1987

- Trawl allocation of sablefish reached; further landings prohibited.

Effective November 25, 1987

- OY quota for widow rockfish reached; further landings prohibited until January 1, 1988.

Appendix 4

Landed commercial catch by gear type and international statistical area.

OREGON PFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (TONS) FOR 1987 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3C-S | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|-------|-------|--------|--------|--------|--------|------|---------|
| ARROWTOOTH FLOUNDER | 90.9 | 110.0 | 359.9 | 116.0 | 41.5 | 6.3 | 0.4 | 725.0 |
| DOVER SOLE | 164.3 | 178.1 | 1334.8 | 552.0 | 2993.3 | 781.0 | 23.2 | 6016.8 |
| ENGLISH SOLE | 1.7 | 16.2 | 227.2 | 67.5 | 222.8 | 46.9 | 0.3 | 593.6 |
| PETRALE SOLE | 4.8 | 22.2 | 303.2 | 168.5 | 222.7 | 130.1 | 0.3 | 851.9 |
| REX SOLE | 1.7 | 7.5 | 185.0 | 34.8 | 41.7 | 14.4 | 0.6 | 285.3 |
| ROCK SOLE | - | - | - | 0.9 | 0.2 | - | - | 1.1 |
| STARRY FLOUNDER | - | 18.8 | 41.0 | 16.5 | 14.8 | TR | TR | 91.1 |
| OTHER FLATFISH | - | 5.7 | 222.5 | 41.1 | 178.4 | 0.8 | 0.1 | 448.5 |
| ___ALL FLATFISH | 263.4 | 358.5 | 2673.6 | 997.3 | 3716.5 | 979.5 | 24.9 | 9013.7 |
| BLACK ROCKFISH | - | - | 16.6 | 0.4 | TR | - | - | 17.0 |
| BOCACCIO | - | 7.4 | 98.1 | 56.9 | 59.9 | 14.2 | TR | 236.6 |
| CANARY ROCKFISH | - | 55.5 | 356.0 | 359.0 | 530.9 | 60.0 | - | 1361.3 |
| DARKBLOTCHED ROCKFIS | - | 13.8 | 141.1 | 252.1 | 179.3 | 98.3 | 5.0 | 689.5 |
| REDSTRIPE ROCKFISH | - | 3.0 | 113.1 | 27.0 | 87.0 | 2.1 | - | 232.3 |
| SHARPCHIN ROCKFISH | - | 2.3 | 66.9 | 30.3 | 21.4 | 3.3 | - | 124.7 |
| SILVERGREY ROCKFISH | - | 12.5 | 76.2 | 72.9 | 18.5 | 1.1 | - | 181.2 |
| SPLITNOSE ROCKFISH | - | 1.0 | 24.4 | 66.6 | 31.4 | 9.1 | 1.0 | 133.3 |
| YELLOW EYE ROCKFISH | - | 2.0 | 15.0 | 23.9 | 20.9 | 2.1 | - | 63.9 |
| YELLOWMOUTH ROCKFISH | - | 3.5 | 42.9 | 169.7 | 17.2 | 0.2 | - | 233.5 |
| YELLOWTAIL ROCKFISH | 4.9 | 70.9 | 888.4 | 146.0 | 241.0 | 40.8 | 11.2 | 1403.2 |
| OTHER ROCKFISH | - | 9.4 | 131.1 | 99.2 | 66.4 | 23.6 | 0.4 | 330.2 |
| ___SEBASTES COMPLEX | 4.9 | 181.3 | 1969.7 | 1304.6 | 1273.8 | 254.9 | 17.6 | 5006.8 |
| PACIFIC OCEAN PERCH | 25.4 | 27.3 | 271.8 | 195.9 | 16.6 | 6.8 | 0.2 | 544.0 |
| SHORTBELLY ROCKFISH | - | - | TR | - | TR | - | - | 0.1 |
| THORNYHEADS | 5.9 | 23.0 | 93.8 | 163.1 | 271.3 | 124.6 | 9.4 | 691.0 |
| WIDOW ROCKFISH | 2.0 | 3.0 | 596.4 | 414.7 | 149.1 | 19.7 | 1.7 | 1186.6 |
| UNSP. ROCKFISH | 137.4 | - | 2.7 | TR | 19.1 | 0.6 | 4.2 | 164.0 |
| ___ALL ROCKFISH | 175.6 | 234.6 | 2934.4 | 2078.2 | 1729.9 | 406.6 | 33.2 | 7592.5 |
| LINGCOD | 13.2 | 30.8 | 184.7 | 81.5 | 163.8 | 74.1 | 8.8 | 557.0 |
| PACIFIC COD | 5.1 | 33.5 | 300.9 | 100.6 | 175.4 | 22.7 | 2.9 | 641.1 |
| PACIFIC WHITING | - | - | 16.7 | 22.4 | 25.0 | TR | - | 64.1 |
| SABLEFISH | 43.0 | 77.1 | 750.1 | 635.6 | 795.1 | 206.1 | 10.5 | 2517.4 |
| UNSP. ROUND FISH | - | - | 1.3 | 5.9 | 0.6 | 0.6 | - | 8.4 |
| ___ALL ROUND FISH | 61.4 | 141.4 | 1253.8 | 845.9 | 1159.8 | 303.5 | 22.2 | 3787.9 |
| OTHER GROUND FISH | TR | - | 3.7 | 0.2 | 0.3 | TR | - | 4.1 |
| UNSP. GROUND FISH | - | - | 2.1 | 1.1 | 5.8 | 0.1 | - | 9.1 |
| ___MISC. GROUND FISH | TR | - | 5.8 | 1.3 | 6.1 | 0.1 | - | 13.2 |
| ALL GROUND FISH | 500.4 | 734.5 | 6867.5 | 3922.8 | 6612.3 | 1689.7 | 80.3 | 20407.4 |
| ESTIMATED TRAWL HOURS | | | | | | | | |
| ALL GROUND FISH | 817 | 1895 | 16837 | 12987 | 23231 | 4730 | 311 | 60808 |
| METRIC TONS PER TRAWL HOUR | | | | | | | | |
| ALL GROUND FISH | 0.61 | 0.39 | 0.41 | 0.30 | 0.28 | 0.36 | 0.26 | 0.34 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR NOVEMBER 1987 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3C-S | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|------|------|-------|-------|-------|-------|------|-------|
| ARROWTOOTH FLOUNDER | 1.6 | - | 5.9 | 0.2 | 1.0 | 0.8 | TR | 9.5 |
| DOVER SOLE | 1.3 | 0.7 | 56.1 | 41.1 | 232.9 | 66.3 | - | 398.4 |
| ENGLISH SOLE | - | 1.9 | 3.4 | 4.1 | 10.6 | 2.0 | - | 22.0 |
| PETRALE SOLE | - | 0.1 | 10.2 | 4.3 | 22.4 | 22.9 | TR | 59.8 |
| REX SOLE | - | 0.4 | 4.0 | 2.1 | 2.5 | 1.3 | - | 10.3 |
| ROCK SOLE | - | - | - | 0.3 | TR | - | - | 0.3 |
| STARRY FLOUNDER | - | - | 0.6 | 0.6 | TR | - | - | 1.2 |
| OTHER FLATFISH | - | - | 2.0 | 2.2 | 1.6 | 0.1 | - | 5.9 |
| ___ALL FLATFISH | 2.9 | 3.1 | 82.1 | 54.9 | 271.0 | 93.5 | TR | 507.5 |
| BLACK ROCKFISH | - | - | 1.0 | - | - | - | - | 1.0 |
| BOCACCIO | - | 0.6 | 1.9 | 4.7 | 7.8 | 0.6 | - | 15.6 |
| CANARY ROCKFISH | - | 5.4 | 12.5 | 11.2 | 54.9 | 2.2 | - | 86.1 |
| DARKBLOTCHED ROCKFISH | - | - | 5.8 | 8.5 | 20.5 | 10.1 | 0.8 | 45.7 |
| REDSTRIPE ROCKFISH | - | TR | 2.2 | 0.3 | 1.9 | TR | - | 4.4 |
| SHARPCIN ROCKFISH | - | TR | 2.6 | 0.6 | 1.1 | 0.3 | - | 4.7 |
| SILVERGREY ROCKFISH | - | 0.1 | 4.6 | 1.6 | 1.3 | TR | - | 7.7 |
| SPLITNOSE ROCKFISH | - | - | 0.2 | 1.8 | 1.5 | 0.7 | TR | 4.2 |
| YELLOW EYE ROCKFISH | - | 0.1 | 0.8 | 1.9 | 1.8 | TR | - | 4.7 |
| YELLOWMOUTH ROCKFISH | - | - | 2.1 | 5.0 | 2.2 | - | - | 9.3 |
| YELLOWTAIL ROCKFISH | - | 4.3 | 14.9 | 5.6 | 33.0 | 0.5 | 0.4 | 58.7 |
| OTHER ROCKFISH | - | - | 5.9 | 5.0 | 7.5 | 1.3 | 0.1 | 19.8 |
| ___SEBASTES COMPLEX | - | 10.5 | 54.6 | 46.2 | 133.4 | 15.7 | 1.4 | 261.8 |
| PACIFIC OCEAN PERCH | 0.6 | TR | 14.0 | 5.8 | 1.4 | 0.6 | TR | 22.4 |
| SHORTBELLY ROCKFISH | - | - | - | - | TR | - | - | TR |
| THORNYHEADS | - | - | 3.9 | 3.8 | 9.2 | 4.0 | - | 20.9 |
| WIDOW ROCKFISH | - | - | 10.1 | 9.6 | 1.0 | 1.3 | 0.3 | 22.4 |
| UNSP. ROCKFISH | 14.5 | - | - | - | - | - | - | 14.5 |
| ___ALL ROCKFISH | 15.1 | 10.5 | 82.7 | 65.5 | 145.0 | 21.6 | 1.7 | 342.1 |
| LINGCOD | 1.7 | 3.6 | 5.1 | 1.7 | 15.0 | 3.8 | 0.3 | 31.2 |
| PACIFIC COD | - | 1.8 | 9.0 | 0.9 | 4.8 | 1.2 | TR | 17.7 |
| SABLEFISH | - | - | - | 2.9 | 6.9 | 2.2 | - | 11.9 |
| ___ALL ROUND FISH | 1.7 | 5.4 | 14.0 | 5.4 | 26.7 | 7.3 | 0.3 | 60.8 |
| OTHER GROUND FISH | TR | - | TR | TR | 0.1 | - | - | 0.1 |
| ___MISC. GROUND FISH | TR | - | TR | TR | 0.1 | - | - | 0.1 |
| ALL GROUND FISH | 19.7 | 19.0 | 178.9 | 125.7 | 442.8 | 122.3 | 2.1 | 910.5 |
| ESTIMATED TRAWL HOURS | | | | | | | | |
| ALL GROUND FISH | 11 | 45 | 463 | 497 | 1198 | 373 | 4 | 2592 |
| METRIC TONS PER TRAWL HOUR | | | | | | | | |
| ALL GROUND FISH | 1.79 | 0.42 | 0.39 | 0.25 | 0.37 | 0.33 | 0.52 | 0.35 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR DECEMBER 1987 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3C-S | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|------|------|-------|-------|-------|-------|------|-------|
| ARROWTOOTH FLOUNDER | 1.8 | - | 9.2 | 6.6 | 1.3 | 0.2 | - | 19.1 |
| DOVER SOLE | 7.6 | 13.7 | 57.1 | 37.0 | 222.9 | 40.8 | 2.2 | 381.4 |
| ENGLISH SOLE | - | 0.9 | 3.8 | 7.2 | 13.3 | 0.8 | - | 26.0 |
| PETRALE SOLE | 1.2 | 0.3 | 32.7 | 26.0 | 53.9 | 47.5 | - | 161.6 |
| REX SOLE | 0.1 | 0.4 | 2.1 | 3.8 | 2.1 | 1.6 | 0.2 | 10.4 |
| ROCK SOLE | - | - | - | 0.1 | - | - | - | 0.1 |
| STARRY FLOUNDER | - | - | - | 0.4 | - | - | - | 0.4 |
| OTHER FLATFISH | - | - | 0.9 | 3.1 | 1.3 | - | - | 5.3 |
| ___ALL FLATFISH | 10.7 | 15.3 | 105.8 | 84.3 | 294.7 | 91.0 | 2.4 | 604.2 |
| BLACK ROCKFISH | - | - | 0.9 | - | - | - | - | 0.9 |
| BOCACCIO | - | 0.2 | 1.9 | 6.8 | 1.7 | 0.8 | - | 11.2 |
| CANARY ROCKFISH | - | 1.4 | 11.3 | 17.5 | 16.1 | 1.5 | - | 47.8 |
| DARKBLOTCHED ROCKFISH | - | - | 5.3 | 4.5 | 6.6 | 7.3 | - | 23.6 |
| REI:STRIPE ROCKFISH | - | TR | 2.5 | 0.2 | 0.9 | TR | - | 3.6 |
| SHARPCHIN ROCKFISH | - | TR | 2.7 | 0.3 | 0.3 | 0.8 | - | 4.1 |
| SILVERGREY ROCKFISH | - | TR | 4.2 | 2.1 | 0.1 | TR | - | 6.4 |
| SPLITNOSE ROCKFISH | - | - | 0.2 | 1.0 | 0.4 | 1.0 | - | 2.6 |
| YELLOWEYE ROCKFISH | - | TR | 0.7 | 1.1 | 0.5 | TR | - | 2.4 |
| YELLOWMOUTH ROCKFISH | - | TR | 1.9 | 1.8 | TR | - | - | 3.7 |
| YELLOWTAIL ROCKFISH | 0.4 | - | 8.7 | 0.3 | 2.5 | 1.9 | - | 13.7 |
| OTHER ROCKFISH | - | - | 5.4 | 4.6 | 2.4 | 1.2 | - | 13.6 |
| ___SEBASTES COMPLEX | 0.4 | 1.6 | 45.4 | 40.1 | 31.6 | 14.6 | - | 133.7 |
| PACIFIC OCEAN PERCH | 0.4 | 0.8 | 9.3 | 3.5 | 0.4 | 0.8 | - | 15.1 |
| THORNYHEADS | - | 1.8 | 5.4 | 5.8 | 10.9 | 4.3 | 1.1 | 29.2 |
| WIDOW ROCKFISH | - | - | 0.3 | TR | 0.1 | TR | - | 0.4 |
| UNSP. ROCKFISH | 4.1 | - | - | - | - | - | - | 4.1 |
| ___ALL ROCKFISH | 4.9 | 4.2 | 60.4 | 49.5 | 42.8 | 19.7 | 1.1 | 182.5 |
| LINGCOD | - | - | 2.7 | 4.7 | 1.9 | 1.1 | - | 10.4 |
| PACIFIC COD | 0.1 | 0.3 | 6.4 | 3.5 | 1.7 | TR | - | 12.0 |
| SABLEFISH | - | - | - | TR | 1.4 | 0.7 | - | 2.1 |
| ___ALL ROUND FISH | 0.1 | 0.3 | 9.0 | 8.3 | 5.0 | 1.8 | - | 24.5 |
| OTHER GROUND FISH | - | - | - | - | 0.1 | - | - | 0.1 |
| UNSP. GROUND FISH | - | - | TR | - | TR | - | - | TR |
| ___MISC. GROUND FISH | - | - | TR | - | 0.1 | - | - | 0.1 |
| ALL GROUND FISH | 15.7 | 19.8 | 175.2 | 142.0 | 342.6 | 112.5 | 3.5 | 811.3 |
| ESTIMATED TRAWL HOURS | | | | | | | | |
| ALL GROUND FISH | 27 | 52 | 473 | 774 | 1530 | 511 | 33 | 3400 |
| METRIC TONS PER TRAWL HOUR | | | | | | | | |
| ALL GROUND FISH | 0.58 | 0.38 | 0.37 | 0.18 | 0.22 | 0.22 | 0.11 | 0.24 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR SEPTEMBER 1987 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3C-S | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|------|------|-------|-------|--------|-------|------|--------|
| ARROWTOOTH FLOUNDER | - | 13.3 | 67.7 | 22.8 | 10.3 | 2.4 | 0.1 | 116.7 |
| DOVER SOLE | - | 10.7 | 176.9 | 91.4 | 353.2 | 159.5 | 1.7 | 793.4 |
| ENGLISH SOLE | - | 0.5 | 12.8 | 12.1 | 51.0 | 7.8 | - | 84.2 |
| PETRALE SOLE | 0.2 | 2.3 | 16.9 | 7.9 | 7.5 | 1.8 | TR | 36.5 |
| REX SOLE | 0.3 | 1.3 | 31.4 | 4.8 | 3.5 | 2.8 | - | 44.1 |
| ROCK SOLE | - | - | - | TR | 0.1 | - | - | 0.1 |
| STARRY FLOUNDER | - | - | 3.9 | 3.1 | 1.1 | - | - | 8.1 |
| OTHER FLATFISH | - | - | 13.3 | 4.7 | 23.0 | - | - | 41.0 |
| ___ALL FLATFISH | 3.5 | 28.2 | 323.0 | 146.7 | 449.8 | 174.2 | 1.8 | 1124.1 |
| BLACK ROCKFISH | - | - | 2.4 | 0.4 | - | - | - | 2.8 |
| BOCACCIO | - | 0.2 | 6.8 | 4.8 | 17.5 | 4.2 | - | 33.5 |
| CANARY ROCKFISH | - | 3.3 | 38.0 | 34.5 | 174.1 | 24.6 | - | 274.6 |
| DARKBLOTCHED ROCKFISH | - | 1.6 | 5.4 | 29.0 | 16.6 | 11.4 | 1.7 | 65.8 |
| REDSTRIPE ROCKFISH | - | 0.2 | 12.9 | 3.2 | 22.8 | 1.4 | - | 40.5 |
| SHARPCIN ROCKFISH | - | 0.4 | 8.4 | 2.6 | 4.1 | 0.5 | - | 16.0 |
| SILVERGREY ROCKFISH | - | 1.0 | 10.7 | 10.3 | 7.5 | 0.9 | - | 30.4 |
| SPLITNOSE ROCKFISH | - | 0.2 | 1.4 | 8.4 | 0.7 | 0.1 | 0.3 | 11.0 |
| YELLOW EYE ROCKFISH | - | 0.4 | 2.7 | 2.1 | 8.2 | 1.2 | - | 14.6 |
| YELLOWMOUTH ROCKFISH | - | 0.4 | 3.9 | 8.6 | 2.5 | 0.1 | - | 15.6 |
| YELLOWTAIL ROCKFISH | 0.7 | 1.9 | 65.1 | 20.6 | 58.8 | 13.2 | - | 160.3 |
| OTHER ROCKFISH | - | 1.1 | 4.4 | 5.6 | 9.8 | 10.2 | 0.1 | 31.2 |
| ___SEBASTES COMPLEX | 0.7 | 10.6 | 161.9 | 130.2 | 322.6 | 68.0 | 2.1 | 696.1 |
| PACIFIC OCEAN PERCH | 2.9 | 2.9 | 25.6 | 21.6 | 2.0 | 0.2 | 0.1 | 55.3 |
| THORNYHEADS | - | 1.4 | 5.0 | 17.6 | 36.4 | 14.1 | TR | 74.6 |
| WIDOW ROCKFISH | - | TR | 48.7 | 50.2 | 9.5 | 5.3 | - | 113.8 |
| UNSP. ROCKFISH | 46.2 | - | - | TR | - | - | - | 46.2 |
| ___ALL ROCKFISH | 49.7 | 15.0 | 241.3 | 219.7 | 370.5 | 87.6 | 2.2 | 985.9 |
| LINGCOD | 5.1 | 4.1 | 45.9 | 8.4 | 43.0 | 20.4 | 1.7 | 128.6 |
| PACIFIC COD | 0.9 | 9.9 | 32.6 | 11.3 | 29.1 | 5.1 | 0.8 | 89.6 |
| PACIFIC WHITING | - | - | - | - | 3.6 | - | - | 3.6 |
| SABLEFISH | 1.6 | 9.3 | 143.6 | 151.2 | 164.3 | 47.3 | 0.9 | 518.1 |
| UNSP. ROUND FISH | - | - | - | 0.5 | 0.4 | 0.5 | - | 1.4 |
| ___ALL ROUND FISH | 7.5 | 23.3 | 222.1 | 171.4 | 240.4 | 73.3 | 3.4 | 741.3 |
| OTHER GROUND FISH | - | - | TR | TR | - | - | - | TR |
| UNSP. GROUND FISH | - | - | - | 0.1 | 0.1 | - | - | 0.2 |
| ___MISC. GROUND FISH | - | - | TR | 0.1 | 0.1 | - | - | 0.2 |
| ALL GROUND FISH | 57.8 | 66.5 | 786.3 | 537.8 | 1060.7 | 335.1 | 7.4 | 2851.6 |
| ESTIMATED TRAWL HOURS | | | | | | | | |
| ALL GROUND FISH | 59 | 162 | 1913 | 1680 | 3225 | 753 | 30 | 7822 |
| METRIC TONS PER TRAWL HOUR | | | | | | | | |
| ALL GROUND FISH | 0.98 | 0.41 | 0.41 | 0.32 | 0.33 | 0.44 | 0.25 | 0.36 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR OCTOBER 1987 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3C-S | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|-----------------------|------|------|-------|-------|--------|-------|------|--------|
| ARROWTOOTH FLOUNDER | 1.1 | 6.7 | 30.4 | 16.0 | 4.7 | 1.4 | 0.2 | 60.6 |
| DOVER SOLE | 1.5 | 4.4 | 158.4 | 126.8 | 531.5 | 128.1 | 0.6 | 951.3 |
| ENGLISH SOLE | - | 5.5 | 24.6 | 12.9 | 33.9 | 12.5 | - | 89.5 |
| PETRALE SOLE | - | 4.8 | 28.7 | 8.8 | 20.1 | 4.3 | 0.2 | 66.9 |
| REX SOLE | - | 0.8 | 38.5 | 9.1 | 8.0 | 3.1 | - | 59.4 |
| ROCK SOLE | - | - | - | TR | TR | - | - | 0.1 |
| STARRY FLOUNDER | - | - | 7.8 | 4.3 | 0.1 | - | - | 12.2 |
| OTHER FLATFISH | - | 0.2 | 22.3 | 6.4 | 9.7 | 0.1 | - | 38.7 |
| ___ALL FLATFISH | 2.6 | 22.5 | 310.7 | 184.4 | 608.1 | 149.4 | 1.0 | 1278.7 |
| BLACK ROCKFISH | - | - | 2.7 | - | - | - | - | 2.7 |
| BOCACCIO | - | 1.9 | 5.3 | 28.1 | 20.4 | 5.1 | TR | 60.8 |
| CANARY ROCKFISH | - | 17.0 | 34.2 | 65.1 | 173.1 | 21.6 | - | 311.0 |
| DARKBLOTCHED ROCKFISH | - | - | 15.8 | 68.1 | 39.9 | 32.4 | 1.2 | 157.4 |
| REDSTRIPE ROCKFISH | - | 0.1 | 10.9 | 1.7 | 5.1 | 0.1 | - | 17.8 |
| SHARPCHIN ROCKFISH | - | TR | 9.9 | 5.1 | 1.9 | 1.5 | - | 18.5 |
| SILVERGREY ROCKFISH | - | 0.4 | 12.6 | 10.1 | 5.6 | 0.1 | - | 28.7 |
| SPLITNOSE ROCKFISH | - | - | 0.6 | 11.9 | 3.2 | 2.8 | 0.3 | 18.7 |
| YELLOW EYE ROCKFISH | - | 0.2 | 2.3 | 12.0 | 5.8 | 0.5 | - | 20.7 |
| YELLOWMOUTH ROCKFISH | - | TR | 5.8 | 35.1 | 3.6 | TR | - | 44.5 |
| YELLOWTAIL ROCKFISH | - | 7.8 | 88.9 | 11.5 | 51.7 | 11.4 | 10.2 | 181.4 |
| OTHER ROCKFISH | - | - | 16.1 | 35.9 | 15.5 | 5.8 | 0.1 | 73.4 |
| ___SEBASTES COMPLEX | - | 27.4 | 205.0 | 284.5 | 325.8 | 81.2 | 11.8 | 935.7 |
| PACIFIC OCEAN PERCH | 0.2 | 2.2 | 30.3 | 22.1 | 3.4 | 2.6 | 0.1 | 60.8 |
| SHORTBELLY ROCKFISH | - | - | - | - | TR | - | - | TR |
| THORNYHEADS | - | - | 7.5 | 18.9 | 36.4 | 16.0 | 0.2 | 79.0 |
| WIDOW ROCKFISH | - | - | 31.1 | 60.1 | 13.8 | 6.3 | 1.2 | 112.5 |
| UNSP. ROCKFISH | 7.8 | - | - | - | - | - | - | 7.8 |
| ___ALL ROCKFISH | 8.0 | 29.5 | 273.8 | 385.6 | 379.5 | 106.2 | 13.3 | 1195.8 |
| LINGCOD | 3.3 | 2.7 | 22.9 | 17.7 | 32.3 | 28.5 | 1.3 | 108.7 |
| PACIFIC COD | - | 8.9 | 60.7 | 11.5 | 28.0 | 3.8 | 0.2 | 113.1 |
| PACIFIC WHITING | - | - | - | - | 0.8 | TR | - | 0.8 |
| SABLEFISH | - | 5.3 | 78.4 | 81.3 | 100.6 | 32.5 | 1.1 | 299.2 |
| UNSP. ROUND FISH | - | - | - | 3.3 | - | - | - | 3.3 |
| ___ALL ROUND FISH | 3.3 | 17.0 | 162.0 | 113.8 | 161.7 | 64.8 | 2.6 | 525.1 |
| OTHER GROUND FISH | TR | - | TR | TR | TR | TR | - | 0.1 |
| ___MISC. GROUND FISH | TR | - | TR | TR | TR | TR | - | 0.1 |
| ALL GROUND FISH | 13.9 | 69.0 | 746.5 | 683.8 | 1149.3 | 320.4 | 16.8 | 2999.7 |

ESTIMATED TRAWL HOURS

| | | | | | | | | |
|-----------------|----|-----|------|------|------|-----|----|------|
| ALL GROUND FISH | 23 | 153 | 2121 | 1958 | 3608 | 782 | 35 | 8680 |
|-----------------|----|-----|------|------|------|-----|----|------|

METRIC TONS PER TRAWL HOUR

| | | | | | | | | |
|-----------------|------|------|------|------|------|------|------|------|
| ALL GROUND FISH | 0.60 | 0.45 | 0.35 | 0.35 | 0.32 | 0.41 | 0.48 | 0.35 |
|-----------------|------|------|------|------|------|------|------|------|

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUNDFISH LANDED CATCH (MTONS) FOR JULY 1987 FOR GROUNDFISH (OTTER) TRAWL

| SPECIES | 3C-S | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|------|------|-------|-------|-------|-------|------|--------|
| ARROWTOOTH FLOUNDER | 12.7 | 33.3 | 58.9 | 12.3 | 5.3 | 0.3 | - | 122.8 |
| DOVER SOLE | 7.3 | 10.3 | 132.2 | 42.5 | 171.1 | 50.9 | 0.3 | 414.6 |
| ENGLISH SOLE | - | 3.3 | 79.9 | 6.9 | 26.3 | 12.7 | 0.2 | 129.3 |
| PETRALE SOLE | - | 2.9 | 23.7 | 16.2 | 9.5 | 4.9 | TR | 57.3 |
| REX SOLE | 0.3 | 0.9 | 30.6 | 2.0 | 1.7 | 1.1 | - | 36.7 |
| ROCK SOLE | - | - | - | TR | - | - | - | TR |
| STARRY FLOUNDER | - | - | 8.8 | 0.6 | 4.6 | TR | TR | 14.0 |
| OTHER FLATFISH | - | - | 32.3 | 6.3 | 28.7 | 0.4 | 0.1 | 67.7 |
| ___ALL FLATFISH | 20.3 | 50.7 | 366.3 | 86.9 | 247.3 | 70.3 | 0.6 | 842.4 |
| BLACK ROCKFISH | - | - | 2.2 | - | - | - | - | 2.2 |
| BOCACCIO | - | 0.1 | 6.4 | 3.3 | 3.4 | 0.4 | - | 13.6 |
| CANARY ROCKFISH | - | 2.5 | 36.0 | 26.2 | 21.1 | 2.5 | - | 89.3 |
| DARKBLOTCHED ROCKFISH | - | 1.2 | 3.8 | 21.3 | 1.4 | 1.3 | 0.1 | 29.1 |
| REDSTRIPE ROCKFISH | - | 0.2 | 7.6 | 0.4 | 18.6 | TR | - | 26.9 |
| SHARPCIN ROCKFISH | - | 0.3 | 6.8 | 0.8 | 3.8 | TR | - | 11.8 |
| SILVERGREY ROCKFISH | - | 0.8 | 10.3 | 6.5 | 1.2 | 0.1 | - | 18.8 |
| SPLITNOSE ROCKFISH | - | 0.1 | 1.1 | 5.0 | 0.1 | TR | - | 6.4 |
| YELLOWEYE ROCKFISH | - | 0.3 | 2.5 | 1.5 | 1.4 | 0.1 | - | 5.8 |
| YELLOWMOUTH ROCKFISH | - | 0.3 | 3.1 | 6.0 | 0.1 | TR | - | 9.5 |
| YELLOWTAIL ROCKFISH | 1.1 | 2.6 | 103.8 | 3.2 | 3.4 | 1.0 | TR | 115.2 |
| OTHER ROCKFISH | - | 0.8 | 4.3 | 4.1 | 7.3 | 1.1 | TR | 17.6 |
| ___SEBASTES COMPLEX | 1.1 | 9.2 | 187.9 | 78.4 | 61.8 | 6.6 | 0.1 | 345.1 |
| PACIFIC OCEAN PERCH | 1.7 | 1.9 | 32.5 | 11.8 | 0.4 | TR | TR | 48.4 |
| THORNYHEADS | 0.9 | 3.0 | 4.1 | 11.4 | 20.8 | 10.3 | 0.3 | 50.7 |
| WIDOW ROCKFISH | - | TR | 32.3 | 13.6 | 2.4 | 0.1 | - | 48.4 |
| UNSP. ROCKFISH | 20.1 | - | - | - | - | - | - | 20.1 |
| ___ALL ROCKFISH | 23.7 | 14.2 | 256.8 | 115.2 | 85.4 | 17.0 | 0.4 | 512.7 |
| LINGCOD | 1.1 | 3.0 | 21.0 | 16.4 | 18.7 | 2.6 | TR | 63.0 |
| PACIFIC COD | 0.7 | 2.7 | 64.4 | 14.8 | 26.2 | 4.4 | - | 113.2 |
| PACIFIC WHITING | - | - | 3.1 | 21.6 | 6.8 | - | - | 31.5 |
| SABLEFISH | 8.3 | 22.5 | 94.7 | 57.7 | 69.4 | 27.1 | 1.1 | 280.8 |
| UNSP. ROUND FISH | - | - | - | 1.5 | - | TR | - | 1.5 |
| ___ALL ROUND FISH | 10.1 | 28.2 | 183.2 | 112.1 | 121.1 | 34.1 | 1.2 | 490.1 |
| OTHER GROUND FISH | - | - | 3.4 | TR | TR | - | - | 3.4 |
| UNSP. GROUND FISH | - | - | - | 0.1 | 1.1 | - | - | 1.2 |
| ___MISC. GROUND FISH | - | - | 3.4 | 0.1 | 1.1 | - | - | 4.6 |
| ALL GROUND FISH | 54.1 | 93.1 | 809.6 | 314.4 | 454.9 | 121.4 | 2.2 | 1849.7 |
| ESTIMATED TRAWL HOURS | | | | | | | | |
| ALL GROUND FISH | 109 | 235 | 2222 | 1215 | 1926 | 313 | 9 | 6030 |
| METRIC TONS PER TRAWL HOUR | | | | | | | | |
| ALL GROUND FISH | 0.50 | 0.40 | 0.36 | 0.26 | 0.24 | 0.39 | 0.24 | 0.31 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUNDFISH LANDED CATCH (MTONS) FOR AUGUST 1987 FOR GROUNDFISH (OTTER) TRAWL

| SPECIES | 3C-S | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|-------|------|-------|-------|-------|------|------|--------|
| ARROWTOOTH FLOUNDER | 49.7 | 22.8 | 54.1 | 34.2 | 5.7 | 0.4 | TR | 166.9 |
| DOVER SOLE | 8.5 | 10.2 | 154.3 | 83.1 | 178.8 | 33.6 | 0.6 | 469.0 |
| ENGLISH SOLE | 1.4 | 1.7 | 31.1 | 9.1 | 16.0 | 4.1 | TR | 63.4 |
| PETRALE SOLE | - | 2.3 | 23.8 | 6.7 | 3.6 | 1.4 | 0.1 | 38.0 |
| REX SOLE | - | 1.4 | 26.7 | 2.7 | 0.4 | 0.3 | - | 31.5 |
| ROCK SOLE | - | - | - | 0.1 | - | - | - | 0.1 |
| STARRY FLOUNDER | - | 0.9 | 11.2 | 5.8 | 2.9 | TR | TR | 20.7 |
| OTHER FLATFISH | - | 0.3 | 29.9 | 10.1 | 38.6 | 0.1 | TR | 79.2 |
| ___ALL FLATFISH | 59.6 | 39.6 | 331.1 | 151.7 | 246.1 | 39.9 | 0.7 | 868.7 |
| BLACK ROCKFISH | - | - | 3.9 | TR | - | - | - | 3.9 |
| BOCACCIO | - | 0.2 | 11.1 | 3.2 | 2.3 | 0.7 | - | 17.6 |
| CANARY ROCKFISH | - | 3.4 | 62.1 | 29.4 | 23.6 | 3.8 | - | 122.3 |
| DARKBLOTCHED ROCKFISH | - | 2.2 | 7.8 | 14.7 | 2.4 | 3.7 | 1.2 | 31.9 |
| REDSTRIPE ROCKFISH | - | 1.8 | 17.7 | 0.6 | 5.7 | 0.1 | - | 25.9 |
| SHARPCHIN ROCKFISH | - | 1.0 | 12.4 | 0.9 | 1.0 | TR | - | 15.3 |
| SILVERGREY ROCKFISH | - | 1.1 | 17.4 | 5.8 | 1.0 | TR | - | 25.2 |
| SPLITNOSE ROCKFISH | - | 0.2 | 2.1 | 10.2 | 0.1 | TR | 0.4 | 13.0 |
| YELLOW EYE ROCKFISH | - | 0.5 | 4.4 | 1.7 | 1.1 | 0.1 | - | 7.7 |
| YELLOWMOUTH ROCKFISH | - | 0.6 | 6.0 | 3.9 | 0.4 | TR | - | 10.9 |
| YELLOWTAIL ROCKFISH | - | 0.6 | 95.6 | 2.7 | 10.9 | 5.2 | - | 115.1 |
| OTHER ROCKFISH | - | 1.1 | 7.1 | 4.3 | 2.2 | 3.2 | 0.1 | 18.0 |
| ___SEBASTES COMPLEX | - | 12.7 | 247.6 | 77.3 | 50.6 | 16.9 | 1.7 | 406.9 |
| PACIFIC OCEAN PERCH | 3.2 | 4.6 | 43.6 | 10.8 | 0.1 | TR | 0.1 | 62.5 |
| THORNYHEADS | 3.2 | 3.7 | 7.9 | 15.1 | 10.5 | 1.5 | TR | 41.9 |
| WIDOW ROCKFISH | 2.0 | TR | 68.7 | 28.6 | 2.5 | 3.3 | - | 105.1 |
| UNSP. ROCKFISH | 23.9 | - | 0.5 | - | - | - | - | 24.4 |
| ___ALL ROCKFISH | 32.3 | 21.0 | 368.4 | 131.9 | 63.8 | 21.7 | 1.7 | 640.8 |
| LINGCOD | 1.1 | 9.5 | 47.2 | 4.3 | 4.9 | 3.0 | 3.0 | 73.0 |
| PACIFIC COD | 2.8 | 3.3 | 34.0 | 18.3 | 13.5 | 3.8 | 1.8 | 77.6 |
| PACIFIC WHITING | - | - | 9.9 | 0.8 | - | - | - | 10.7 |
| SABLEFISH | 17.8 | 13.4 | 124.9 | 98.5 | 69.0 | 6.1 | - | 329.7 |
| UNSP. ROUND FISH | - | - | 0.5 | 0.3 | - | 0.1 | - | 0.9 |
| ___ALL ROUND FISH | 21.7 | 26.2 | 216.6 | 122.2 | 87.4 | 13.0 | 4.8 | 491.8 |
| OTHER GROUND FISH | - | - | 0.1 | TR | - | - | - | 0.1 |
| UNSP. GROUND FISH | - | - | 0.3 | - | 0.1 | - | - | 0.4 |
| ___MISC. GROUND FISH | - | - | 0.3 | TR | 0.1 | - | - | 0.5 |
| ALL GROUND FISH | 113.5 | 86.8 | 916.5 | 405.8 | 397.3 | 74.6 | 7.3 | 2001.8 |
| ESTIMATED TRAWL HOURS | | | | | | | | |
| ALL GROUND FISH | 157 | 300 | 2450 | 1560 | 1536 | 197 | 20 | 6219 |
| METRIC TONS PER TRAWL HOUR | | | | | | | | |
| ALL GROUND FISH | 0.72 | 0.29 | 0.37 | 0.26 | 0.26 | 0.38 | 0.36 | 0.32 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUNDFISH LANDED CATCH (MTCNS) FOR MAY 1987 FOR GROUNDFISH (OTTER) TRAWL

| SPECIES | 3C-S | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|------|------|-------|-------|-------|------|------|--------|
| ARROWTOOTH FLOUNDER | 0.3 | 11.2 | 22.5 | 10.7 | 6.3 | 0.2 | TR | 51.3 |
| DOVER SOLE | 1.9 | 24.5 | 62.0 | 30.4 | 167.8 | 31.7 | 1.6 | 319.9 |
| ENGLISH SOLE | - | 0.4 | 22.1 | 4.4 | 18.5 | 2.0 | TR | 47.5 |
| PETRALE SOLE | - | 0.4 | 10.6 | 4.4 | 3.4 | 0.2 | - | 19.0 |
| REX SOLE | 0.1 | 0.6 | 12.1 | 1.5 | 4.9 | 0.5 | TR | 19.7 |
| ROCK SOLE | - | - | - | TR | 0.1 | - | - | 0.1 |
| STARRY FLOUNDER | - | 12.6 | 1.1 | 0.3 | 2.4 | - | - | 16.3 |
| OTHER FLATFISH | - | 3.4 | 38.9 | 0.4 | 13.6 | - | - | 56.3 |
| ___ALL FLATFISH | 2.4 | 53.2 | 169.2 | 52.2 | 217.0 | 34.5 | 1.7 | 530.1 |
| BLACK ROCKFISH | - | - | 1.2 | - | - | - | - | 1.2 |
| BOCACCIO | - | 1.5 | 4.7 | 0.7 | 1.1 | 1.2 | - | 9.2 |
| CANARY ROCKFISH | - | 7.0 | 37.9 | 50.4 | 18.2 | 0.2 | - | 113.7 |
| DARKBLOTCHED ROCKFIS | - | 2.3 | 13.1 | 8.6 | 10.2 | 4.2 | - | 38.4 |
| REDSTRIPE ROCKFISH | - | 0.7 | 13.0 | 0.2 | 3.3 | TR | - | 22.2 |
| SHARPCIN ROCKFISH | - | 0.3 | 5.6 | 1.3 | 2.9 | TR | - | 9.9 |
| SILVERGREY ROCKFISH | - | 2.4 | 2.5 | 12.7 | 0.3 | - | - | 17.7 |
| SPLITNOSE ROCKFISH | - | 0.1 | 1.0 | 6.7 | 2.7 | 0.1 | - | 10.7 |
| YELLOW EYE ROCKFISH | - | 0.2 | 0.1 | 0.4 | 0.6 | TR | - | 1.3 |
| YELLOWMOUTH ROCKFISH | - | 0.3 | 5.1 | 12.2 | 0.4 | TR | - | 17.9 |
| YELLOWTAIL ROCKFISH | - | 10.8 | 77.9 | 10.8 | 9.2 | 2.1 | 0.6 | 111.3 |
| OTHER ROCKFISH | - | 0.2 | 10.3 | 10.2 | 7.0 | 0.2 | - | 27.9 |
| ___SEBASTES COMPLEX | - | 25.7 | 172.2 | 114.1 | 60.9 | 7.9 | 0.6 | 381.4 |
| PACIFIC OCEAN PERCH | 0.3 | 2.7 | 21.1 | 19.0 | 2.1 | 0.6 | - | 45.8 |
| SHORTBELLY ROCKFISH | - | - | TR | - | TR | - | - | TR |
| THORNYHEADS | - | 2.1 | 6.2 | 16.2 | 16.7 | 17.9 | - | 59.1 |
| WIDOW ROCKFISH | - | TR | 21.8 | 3.6 | 1.1 | TR | 0.2 | 26.7 |
| UNSP. ROCKFISH | 1.0 | - | 2.0 | - | - | - | 3.7 | 6.7 |
| ___ALL ROCKFISH | 1.3 | 30.6 | 223.3 | 152.9 | 80.8 | 26.5 | 4.5 | 519.8 |
| LINGCOD | 0.1 | 2.1 | 6.0 | 9.9 | 12.3 | 2.4 | 2.4 | 35.7 |
| PACIFIC COD | 0.3 | 1.9 | 24.4 | 23.1 | 42.7 | 1.2 | 0.1 | 93.6 |
| PACIFIC WHITING | - | - | 2.0 | - | 2.1 | - | - | 4.1 |
| SABLEFISH | 1.4 | 2.7 | 53.3 | 55.8 | 100.4 | 18.7 | 0.1 | 232.4 |
| ___ALL ROUND FISH | 1.7 | 6.7 | 85.7 | 88.8 | 158.1 | 22.3 | 2.6 | 365.9 |
| OTHER GROUND FISH | - | - | - | TR | TR | - | - | TR |
| UNSP. GROUND FISH | - | - | 0.3 | TR | 1.2 | - | - | 1.5 |
| ___MISC. GROUND FISH | - | - | 0.3 | TR | 1.2 | - | - | 1.5 |
| ALL GROUND FISH | 5.4 | 90.4 | 478.4 | 293.9 | 457.1 | 83.2 | 8.8 | 1417.2 |
| ESTIMATED TRAWL HOURS | | | | | | | | |
| ALL GROUND FISH | 22 | 182 | 1349 | 1035 | 1746 | 291 | 17 | 4632 |
| METRIC TONS PER TRAWL HOUR | | | | | | | | |
| ALL GROUND FISH | 0.25 | 0.50 | 0.35 | 0.28 | 0.26 | 0.30 | 0.52 | 0.31 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR JUNE 1997 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3C-S | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|------|------|-------|-------|-------|------|------|--------|
| ARROWTOOTH FLOUNDER | - | 6.1 | 49.6 | 9.0 | 1.8 | TR | - | 66.5 |
| DOVER SOLE | - | 0.9 | 83.4 | 24.1 | 57.3 | 12.9 | - | 179.1 |
| ENGLISH SOLE | - | 1.9 | 21.7 | 3.9 | 22.3 | 1.8 | - | 51.6 |
| PETRALE SOLE | - | 0.3 | 11.2 | 2.6 | 8.6 | 0.2 | - | 22.9 |
| REX SOLE | - | 0.8 | 20.4 | 0.8 | 1.1 | 0.1 | TR | 23.3 |
| ROCK SOLE | - | - | - | 0.3 | TR | - | - | 0.3 |
| STARRY FLOUNDER | - | 5.5 | 3.2 | 0.9 | 3.1 | - | - | 12.8 |
| OTHER FLATFISH | - | 1.7 | 17.3 | 3.7 | 19.8 | - | - | 42.6 |
| ___ALL FLATFISH | - | 17.3 | 206.9 | 45.4 | 114.5 | 14.9 | TR | 399.0 |
| BLACK ROCKFISH | - | - | 0.8 | - | - | - | - | 0.8 |
| BOCACCIO | - | 1.8 | 3.2 | 0.2 | 0.5 | 0.3 | - | 6.0 |
| CANARY ROCKFISH | - | 8.3 | 25.7 | 3.6 | 7.9 | TR | - | 45.6 |
| DARKBLOTCHED ROCKFIS | - | 2.6 | 8.3 | 10.6 | 6.1 | 1.1 | - | 28.7 |
| REDSTRIPE ROCKFISH | - | - | 3.7 | 0.2 | 13.2 | TR | - | 17.1 |
| SHARPCHIN ROCKFISH | - | TR | 1.9 | 1.2 | 4.2 | - | - | 7.4 |
| SILVERGREY ROCKFISH | - | 2.8 | 1.7 | 7.3 | 0.1 | - | - | 11.9 |
| SPLITNOSE ROCKFISH | - | 0.1 | 0.6 | 8.5 | 2.3 | TR | - | 11.4 |
| YELLOW EYE ROCKFISH | - | 0.2 | 0.1 | TR | 0.3 | TR | - | 0.6 |
| YELLOWMOUTH ROCKFISH | - | TR | 3.1 | 13.5 | 0.2 | TR | - | 16.8 |
| YELLOWTAIL ROCKFISH | 2.8 | 8.3 | 58.8 | 0.2 | 2.7 | 0.2 | - | 73.0 |
| OTHER ROCKFISH | - | 0.2 | 6.9 | 11.6 | 6.5 | TR | - | 25.2 |
| ___SEBASTES COMPLEX | 2.8 | 24.4 | 114.7 | 56.8 | 44.1 | 1.7 | - | 244.6 |
| PACIFIC OCEAN PERCH | - | 0.1 | 19.4 | 19.1 | 1.1 | 0.1 | - | 39.7 |
| SHORTBELLY ROCKFISH | - | - | TR | - | TR | - | - | TR |
| THORNYHEADS | - | - | 3.0 | 19.9 | 6.5 | 3.0 | - | 32.4 |
| WIDOW ROCKFISH | - | TR | 47.2 | 0.4 | 0.8 | - | - | 48.4 |
| UNSP. ROCKFISH | - | - | - | - | 1.9 | - | 0.3 | 2.2 |
| ___ALL ROCKFISH | 2.8 | 24.5 | 184.3 | 96.2 | 54.4 | 4.8 | 0.3 | 367.4 |
| LINGCOD | 0.5 | 1.1 | 7.4 | 3.0 | 5.8 | 0.3 | 0.1 | 18.2 |
| PACIFIC COD | - | 3.7 | 36.8 | 12.8 | 6.7 | 0.4 | - | 60.5 |
| PACIFIC WHITING | - | - | 1.7 | - | 11.0 | - | - | 12.7 |
| SABLEFISH | - | - | 92.8 | 55.6 | 32.5 | 6.4 | - | 187.3 |
| UNSP. ROUND FISH | - | - | 0.8 | 0.1 | - | - | - | 0.9 |
| ___ALL ROUND FISH | 0.5 | 4.8 | 139.5 | 71.5 | 56.1 | 7.2 | 0.1 | 279.7 |
| OTHER GROUND FISH | - | - | 0.1 | - | TR | - | - | 0.1 |
| UNSP. GROUND FISH | - | - | - | TR | 1.4 | - | - | 1.4 |
| ___MISC. GROUND FISH | - | - | 0.1 | TR | 1.4 | - | - | 1.5 |
| ALI. GROUND FISH | 3.3 | 46.5 | 530.8 | 213.2 | 226.5 | 26.9 | 0.5 | 1047.6 |
| ESTIMATED TRAWL HOURS | | | | | | | | |
| ALL GROUND FISH | 3 | 100 | 1422 | 834 | 924 | 56 | 2 | 3462 |
| METRIC TONS PER TRAWL HOUR | | | | | | | | |
| ALL GROUND FISH | 1.09 | 0.46 | 0.37 | 0.26 | 0.25 | 0.48 | 0.25 | 0.30 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR MARCH 1987 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3C-S | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|------|------|-------|-------|-------|------|------|--------|
| ARROWTOOTH FLOUNDER | 6.9 | 5.1 | 24.7 | 0.3 | 1.4 | 0.1 | TR | 38.7 |
| DOVER SOLE | 44.4 | 14.8 | 196.6 | 13.4 | 309.3 | 41.5 | 15.0 | 635.0 |
| ENGLISH SOLE | - | - | 4.8 | 1.5 | 8.2 | 0.7 | TR | 15.2 |
| PETRALE SOLE | 0.2 | 1.3 | 8.8 | 2.0 | 6.8 | 1.5 | - | 20.5 |
| REX SOLE | 0.1 | 0.1 | 3.4 | 1.3 | 3.6 | 0.4 | TR | 8.8 |
| STARRY FLOUNDER | - | - | 1.0 | TR | 0.1 | - | - | 1.1 |
| OTHER FLATFISH | - | - | 17.4 | 0.7 | 24.6 | 0.1 | - | 42.7 |
| ___ALL FLATFISH | 51.6 | 21.3 | 256.7 | 19.2 | 353.9 | 44.3 | 15.0 | 762.0 |
| BLACK ROCKFISH | - | - | 0.1 | - | TR | - | - | 0.2 |
| BOCACCIO | - | TR | 21.3 | 1.8 | 0.5 | TR | - | 23.7 |
| CANARY ROCKFISH | - | 0.4 | 25.5 | 19.8 | 3.5 | 1.1 | - | 50.3 |
| DARKBLOTCHED ROCKFIS | - | 0.4 | 26.4 | 21.8 | 15.5 | 6.7 | - | 70.8 |
| REDSTRIPE ROCKFISH | - | TR | 13.3 | 4.5 | 1.1 | 0.1 | - | 19.0 |
| SHARPCHIN ROCKFISH | - | TR | 5.1 | 4.1 | TR | TR | - | 9.3 |
| SILVERGREY ROCKFISH | - | 0.3 | 4.1 | 3.9 | 0.3 | TR | - | 8.6 |
| SPLITNOSE ROCKFISH | - | TR | 6.6 | 3.5 | 9.0 | 1.1 | - | 20.2 |
| YELLOWEYE ROCKFISH | - | - | 0.5 | 0.9 | 0.1 | TR | - | 1.5 |
| YELLOWMOUTH ROCKFISH | - | 0.2 | 3.3 | 24.9 | 1.1 | - | - | 29.5 |
| YELLOWTAIL ROCKFISH | - | 4.5 | 139.6 | 19.9 | 37.9 | 2.7 | - | 204.6 |
| OTHER ROCKFISH | - | 0.9 | 25.0 | 4.5 | 0.8 | 0.1 | - | 31.3 |
| ___SEBASTES COMPLEX | - | 6.8 | 270.8 | 109.5 | 69.9 | 11.8 | - | 468.9 |
| PACIFIC OCEAN PERCH | 3.9 | 4.6 | 21.7 | 15.6 | 1.4 | 0.3 | - | 47.5 |
| THORNYHEADS | - | 1.5 | 19.9 | 10.3 | 20.5 | 11.4 | 6.6 | 70.1 |
| WIDOW ROCKFISH | - | TR | 51.7 | 31.5 | 57.7 | 1.7 | - | 142.6 |
| UNSP. ROCKFISH | 3.7 | - | 0.2 | - | - | - | 0.1 | 4.0 |
| ___ALL ROCKFISH | 7.6 | 12.9 | 364.2 | 166.9 | 149.4 | 25.2 | 6.7 | 733.0 |
| LINGCOD | - | 0.7 | 6.9 | 2.7 | 6.0 | 8.3 | - | 24.5 |
| PACIFIC COD | TR | TR | 2.1 | 2.4 | 7.7 | 1.0 | - | 13.2 |
| SABLEFISH | 2.6 | 3.6 | 47.3 | 32.2 | 52.3 | 14.4 | 5.9 | 158.2 |
| UNSP. ROUND FISH | - | - | - | 0.1 | 0.1 | - | - | 0.2 |
| ___ALL ROUND FISH | 2.6 | 4.3 | 56.3 | 37.3 | 66.1 | 23.6 | 5.9 | 196.1 |
| OTHER GROUND FISH | - | - | TR | TR | TR | - | - | TR |
| UNSP. GROUND FISH | - | - | 0.1 | - | 0.5 | 0.1 | - | 0.8 |
| ___MISC. GROUND FISH | - | - | 0.2 | TR | 0.6 | 0.1 | - | 0.8 |
| ALL GROUND FISH | 61.8 | 38.6 | 677.4 | 223.5 | 569.9 | 93.2 | 27.6 | 1691.9 |
| ESTIMATED TRAWL HOURS | | | | | | | | |
| ALL GROUND FISH | 89 | 98 | 1035 | 596 | 1793 | 310 | 127 | 4047 |
| METRIC TONS PER TRAWL HOUR | | | | | | | | |
| ALL GROUND FISH | 0.69 | 0.39 | 0.65 | 0.37 | 0.32 | 0.30 | 0.22 | 0.42 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR APRIL 1987 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3C-5 | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|------|------|-------|-------|-------|-------|------|--------|
| ARROWTOOTH FLOUNDER | 5.2 | 1.7 | 12.4 | 0.4 | 2.3 | 0.3 | - | 22.3 |
| DOVER SOLE | 41.7 | 4.2 | 156.6 | 12.2 | 181.1 | 75.0 | 0.4 | 477.1 |
| ENGLISH SOLE | 0.1 | - | 10.6 | 0.9 | 9.5 | 1.4 | - | 22.5 |
| PETRALE SOLE | 1.9 | 0.1 | 10.4 | 0.3 | 4.9 | 0.5 | - | 18.6 |
| REX SOLE | - | - | 6.8 | 2.2 | 4.3 | 0.8 | - | 14.2 |
| STARRY FLOUNDER | - | - | 3.4 | 0.4 | 0.3 | - | - | 4.0 |
| OTHER FLATFISH | - | - | 35.1 | 1.5 | 9.2 | - | - | 45.8 |
| ___ALL FLATFISH | 48.3 | 6.0 | 235.2 | 24.4 | 211.6 | 78.0 | 0.4 | 604.4 |
| BLACK ROCKFISH | - | - | 1.1 | - | - | - | - | 1.1 |
| BOCACCIO | - | 0.9 | 4.3 | 0.7 | 0.9 | 0.9 | - | 7.7 |
| CANARY ROCKFISH | - | 4.0 | 35.0 | 59.3 | 22.3 | 0.1 | - | 121.2 |
| DARKBLOTCHED ROCKFIS | - | 1.3 | 10.9 | 4.3 | 8.8 | 3.4 | - | 28.5 |
| REDSTRIPE ROCKFISH | - | - | 2.1 | 0.2 | 6.9 | TR | - | 9.3 |
| SHARPCHIN ROCKFISH | - | TR | 1.5 | 0.6 | 2.0 | TR | - | 4.1 |
| SILVERGREY ROCKFISH | - | 1.4 | 2.3 | 4.4 | 0.4 | - | - | 8.4 |
| SPLITNOSE ROCKFISH | - | TR | 0.5 | 1.3 | 2.0 | 0.1 | - | 3.9 |
| YELLOW EYE ROCKFISH | - | 0.1 | 0.1 | 0.4 | 0.6 | TR | - | 1.3 |
| YELLOWMOUTH ROCKFISH | - | 0.1 | 3.1 | 6.1 | 0.6 | TR | - | 9.8 |
| YELLOWTAIL ROCKFISH | - | 5.3 | 60.1 | 33.9 | 7.7 | 2.6 | - | 112.5 |
| OTHER ROCKFISH | - | 0.1 | 9.3 | 2.0 | 5.1 | 0.2 | - | 16.6 |
| ___SEBASTES COMPLEX | - | 13.2 | 130.2 | 116.6 | 57.2 | 7.3 | - | 324.5 |
| PACIFIC OCEAN PERCH | 4.0 | 0.7 | 17.6 | 15.5 | 1.9 | 0.5 | - | 40.2 |
| SHORTBELLY ROCKFISH | - | - | TR | - | TR | - | - | TR |
| THORNYHEADS | - | 1.6 | 13.9 | 10.5 | 17.2 | 15.9 | 0.5 | 59.6 |
| WIDOW ROCKFISH | - | 0.4 | 59.4 | 22.7 | 3.2 | 0.4 | - | 86.1 |
| UNSP. ROCKFISH | 6.3 | - | - | - | 1.3 | - | TR | 7.6 |
| ___ALL ROCKFISH | 10.3 | 15.9 | 221.1 | 165.3 | 80.8 | 24.2 | 0.5 | 517.9 |
| LINGCOD | - | 2.2 | 3.3 | 1.8 | 18.4 | 1.6 | - | 27.2 |
| PACIFIC COD | 0.4 | 0.2 | 17.5 | 0.7 | 9.3 | 1.6 | - | 29.7 |
| PACIFIC WHITING | - | - | - | - | 0.7 | - | - | 0.7 |
| SABLEFISH | 5.8 | 1.6 | 75.7 | 19.6 | 57.1 | 23.0 | 0.6 | 183.4 |
| UNSP. ROUND FISH | - | - | - | TR | - | - | - | TR |
| ___ALL ROUND FISH | 6.1 | 4.0 | 96.6 | 22.2 | 85.4 | 26.2 | 0.6 | 241.0 |
| UNSP. GROUND FISH | - | - | 1.4 | 0.3 | 1.2 | - | - | 2.9 |
| ___MISC. GROUND FISH | - | - | 1.4 | 0.3 | 1.2 | - | - | 2.9 |
| ALL GROUND FISH | 65.2 | 25.9 | 554.2 | 212.2 | 379.0 | 128.4 | 1.4 | 1366.3 |
| ESTIMATED TRAWL HOURS | | | | | | | | |
| ALL GROUND FISH | 111 | 70 | 1361 | 511 | 1613 | 332 | 7 | 4005 |
| METRIC TONS PER TRAWL HOUR | | | | | | | | |
| ALL GROUND FISH | 0.59 | 0.37 | 0.41 | 0.42 | 0.23 | 0.39 | 0.20 | 0.34 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUNDFISH LANDED CATCH (MTONS) FOR JANUARY 1987 FOR GROUNDFISH (OTTER) TRAWL

| SPECIES | 3C-S | 3B | 3A | 2C | 2B | 2A | TOTAL |
|----------------------|------|-------|-------|-------|-------|-------|--------|
| ARROWTOOTH FLOUNDER | 3.7 | 6.1 | 10.6 | 1.7 | 0.2 | TR | 22.4 |
| DOVER SOLE | 11.3 | 69.1 | 44.9 | 27.3 | 322.5 | 47.6 | 522.8 |
| ENGLISH SOLE | 0.2 | - | 8.4 | 2.9 | 13.3 | 0.6 | 25.3 |
| PETRALE SOLE | - | 0.9 | 82.7 | 61.7 | 54.7 | 37.5 | 237.5 |
| REX SOLE | 0.3 | 0.3 | 4.3 | 1.5 | 4.0 | 1.9 | 12.3 |
| ROCK SOLE | - | - | - | TR | - | - | TR |
| STARRY FLOUNDER | - | - | TR | - | TR | - | 0.1 |
| OTHER FLATFISH | - | - | 10.9 | 0.3 | 1.1 | - | 12.4 |
| ___ALL FLATFISH | 15.5 | 76.4 | 161.9 | 95.4 | 395.8 | 97.7 | 832.8 |
| BLACK ROCKFISH | - | - | 0.1 | - | TR | - | 0.1 |
| BOCACCIO | - | 0.1 | 16.1 | 1.3 | 1.6 | - | 19.1 |
| CANARY ROCKFISH | - | 1.4 | 19.4 | 15.3 | 7.7 | 0.7 | 44.6 |
| DARKBLOTCHED ROCKFIS | - | 1.1 | 19.8 | 34.9 | 13.8 | 5.9 | 75.6 |
| REDSTRIPE ROCKFISH | - | TR | 12.2 | 11.7 | 1.3 | 0.2 | 25.4 |
| SHARPCHIN ROCKFISH | - | 0.2 | 4.5 | 9.2 | 0.1 | TR | 13.9 |
| SILVERGREY ROCKFISH | - | 1.2 | 3.1 | 5.0 | 0.3 | - | 9.5 |
| SPLITNOSE ROCKFISH | - | 0.1 | 5.0 | 5.0 | 5.2 | 1.9 | 17.2 |
| YELLOWEYE ROCKFISH | - | - | 0.4 | 0.7 | 0.2 | TR | 1.4 |
| YELLOWMOUTH ROCKFISH | - | 0.8 | 2.4 | 30.4 | 1.4 | - | 35.0 |
| YELLOWTAIL ROCKFISH | - | 15.2 | 90.3 | 14.7 | 9.5 | - | 129.8 |
| OTHER ROCKFISH | - | 2.9 | 18.7 | 7.2 | 0.7 | 0.1 | 29.5 |
| ___SEBASTES COMPLEX | - | 22.9 | 192.0 | 135.5 | 41.7 | 8.9 | 401.0 |
| PACIFIC OCEAN PERCH | 3.1 | 4.0 | 15.0 | 27.4 | 0.7 | 0.3 | 50.6 |
| THORNYHEADS | 1.3 | 4.7 | 8.6 | 17.4 | 31.7 | 10.2 | 73.8 |
| WIDOW ROCKFISH | - | 2.4 | 110.8 | 121.8 | 26.7 | 0.2 | 261.8 |
| UNSP. ROCKFISH | 4.4 | - | - | - | 1.0 | - | 5.5 |
| ___ALL ROCKFISH | 8.8 | 34.1 | 326.3 | 302.0 | 101.8 | 19.5 | 792.5 |
| LINGCOD | 0.1 | 0.4 | 8.0 | 8.6 | 1.8 | 0.4 | 19.3 |
| PACIFIC COD | - | 0.1 | 4.8 | 0.8 | 0.3 | - | 6.1 |
| SABLEFISH | 1.8 | 11.8 | 16.4 | 40.6 | 67.9 | 13.6 | 152.2 |
| UNSP. ROUND FISH | - | - | - | - | TR | - | TR |
| ___ALL ROUND FISH | 1.8 | 12.3 | 29.2 | 50.1 | 70.1 | 14.0 | 177.6 |
| OTHER GROUND FISH | - | - | TR | TR | TR | - | 0.1 |
| UNSP. GROUND FISH | - | - | - | 0.3 | 0.1 | - | 0.4 |
| ___MISC. GROUND FISH | - | - | TR | 0.3 | 0.1 | - | 0.5 |
| ALL GROUND FISH | 26.2 | 122.8 | 517.4 | 447.8 | 567.8 | 121.3 | 1803.3 |

ESTIMATED TRAWL HOURS

| | | | | | | | |
|-----------------|----|-----|-----|------|------|-----|------|
| ALL GROUND FISH | 75 | 214 | 999 | 1295 | 1922 | 425 | 4929 |
|-----------------|----|-----|-----|------|------|-----|------|

METRIC TONS PER TRAWL HOUR

| | | | | | | | |
|-----------------|------|------|------|------|------|------|------|
| ALL GROUND FISH | 0.35 | 0.57 | 0.52 | 0.35 | 0.30 | 0.29 | 0.37 |
|-----------------|------|------|------|------|------|------|------|

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR FEBRUARY 1987 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3C-S | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|------|------|-------|-------|-------|-------|------|--------|
| ARROWTOOTH FLOUNDER | 7.8 | 3.5 | 13.8 | 1.9 | 1.2 | TR | - | 28.2 |
| DOVER SOLE | 38.8 | 14.7 | 56.2 | 16.6 | 254.5 | 93.1 | 0.8 | 474.7 |
| ENGLISH SOLE | 0.1 | TR | 4.2 | 1.6 | 10.8 | 0.6 | - | 17.4 |
| PETRALE SOLE | 1.5 | 6.3 | 43.6 | 27.2 | 27.4 | 7.4 | - | 113.3 |
| REX SOLE | 0.5 | 0.4 | 4.7 | 2.9 | 5.6 | 0.6 | 0.4 | 15.0 |
| ROCK SOLE | - | - | - | TR | - | - | - | TR |
| STARRY FLOUNDER | - | - | 0.1 | TR | 0.1 | - | - | 0.1 |
| OTHER FLATFISH | - | - | 2.4 | 1.4 | 7.1 | 0.1 | - | 11.1 |
| ___ALL FLATFISH | 48.6 | 24.9 | 124.9 | 51.8 | 306.7 | 101.8 | 1.2 | 659.9 |
| BLACK ROCKFISH | - | - | 0.1 | - | TR | - | - | 0.1 |
| BOCACCI | - | 0.1 | 15.3 | 1.2 | 2.1 | TR | - | 18.6 |
| CANARY ROCKFISH | - | 1.3 | 18.4 | 26.3 | 8.4 | 1.6 | - | 55.9 |
| DARKBLOTCHED ROCKFISH | - | 1.1 | 18.9 | 25.9 | 37.4 | 10.8 | - | 94.0 |
| REDSTRIPE ROCKFISH | - | TR | 15.1 | 3.9 | 1.2 | 0.1 | - | 20.3 |
| SHARPCHIN ROCKFISH | - | 0.1 | 5.4 | 4.1 | 0.1 | TR | - | 9.7 |
| SILVERGREY ROCKFISH | - | 1.1 | 2.9 | 3.5 | 0.4 | TR | - | 7.9 |
| SPLITNOSE ROCKFISH | - | 0.1 | 5.0 | 3.3 | 4.2 | 1.4 | - | 14.0 |
| YELLOW EYE ROCKFISH | - | - | 0.4 | 1.2 | 0.3 | TR | - | 1.9 |
| YELLOWMOUTH ROCKFISH | - | 0.8 | 3.1 | 22.3 | 4.8 | - | - | 31.0 |
| YELLOWTAIL ROCKFISH | - | 9.5 | 84.9 | 19.4 | 13.8 | 0.2 | - | 127.8 |
| OTHER ROCKFISH | - | 2.2 | 17.9 | 4.3 | 1.6 | 0.1 | - | 26.2 |
| ___SEBASTES COMPLEX | - | 16.3 | 187.3 | 115.3 | 74.2 | 14.2 | - | 407.3 |
| PACIFIC OCEAN PERCH | 5.0 | 2.7 | 21.8 | 23.7 | 1.8 | 0.8 | - | 55.8 |
| THORNYHEADS | 0.5 | 3.2 | 8.5 | 16.3 | 54.5 | 16.0 | 0.8 | 99.8 |
| WIDOW ROCKFISH | - | 0.1 | 114.3 | 72.4 | 30.5 | 1.1 | - | 218.4 |
| UNSP. ROCKFISH | 5.5 | - | - | - | 14.8 | 0.6 | - | 20.9 |
| ___ALL ROCKFISH | 11.0 | 22.3 | 331.9 | 227.7 | 175.8 | 32.6 | 0.8 | 802.1 |
| LINGCOD | 0.3 | 1.5 | 8.3 | 2.3 | 3.2 | 1.5 | - | 17.2 |
| PACIFIC COD | - | 0.5 | 8.1 | 0.6 | 5.2 | 0.2 | - | 14.7 |
| SABLEFISH | 3.9 | 6.7 | 23.1 | 40.0 | 73.3 | 14.2 | 0.8 | 162.1 |
| UNSP. ROUND FISH | - | - | - | TR | - | - | - | TR |
| ___ALL ROUND FISH | 4.2 | 8.8 | 39.5 | 43.0 | 81.7 | 15.9 | 0.8 | 193.9 |
| OTHER GROUND FISH | - | - | 0.1 | TR | TR | - | - | 0.1 |
| UNSP. GROUND FISH | - | - | TR | 0.3 | 0.1 | - | - | 0.4 |
| ___MISC. GROUND FISH | - | - | 0.1 | 0.3 | 0.1 | - | - | 0.5 |
| ALL GROUND FISH | 63.8 | 56.1 | 496.4 | 322.7 | 564.3 | 150.4 | 2.8 | 1656.4 |
| ESTIMATED TRAWL HOURS | | | | | | | | |
| ALL GROUND FISH | 132 | 163 | 1030 | 1033 | 2210 | 395 | 27 | 4991 |
| METRIC TONS PER TRAWL HOUR | | | | | | | | |
| ALL GROUND FISH | 0.48 | 0.34 | 0.48 | 0.31 | 0.26 | 0.38 | 0.10 | 0.33 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR 1987 FOR MIDWATER TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|------|--------|-------|--------|-------|------|--------|
| DOVER SOLE | - | TR | TR | - | - | - | 0.1 |
| PETRALE SOLE | - | 0.1 | 0.1 | - | - | - | 0.1 |
| ___ALL FLATFISH | - | 0.1 | 0.1 | - | - | - | 0.2 |
| BOCACCIO | - | - | TR | - | - | - | TR |
| CANARY ROCKFISH | - | 28.3 | 13.2 | 16.1 | - | - | 57.6 |
| DARKBLOTCHED ROCKFIS | - | 0.4 | - | - | - | - | 0.4 |
| REDSTRIPE ROCKFISH | - | 13.0 | 0.8 | - | - | - | 13.8 |
| SHARPCHIN ROCKFISH | - | 0.1 | - | - | - | - | 0.1 |
| SILVERGREY ROCKFISH | - | - | 0.2 | - | - | - | 0.2 |
| SPLITNOSE ROCKFISH | - | 2.6 | - | - | - | - | 2.6 |
| YELLOWTAIL ROCKFISH | 17.5 | 210.6 | 4.8 | 1.8 | 0.2 | 0.7 | 235.5 |
| OTHER ROCKFISH | - | 3.0 | - | - | - | - | 3.0 |
| ___SEBASTES COMPLEX | 17.5 | 257.9 | 19.0 | 17.9 | 0.2 | 0.7 | 313.2 |
| THORNYHEADS | - | 1.1 | - | - | - | - | 1.1 |
| WIDOW ROCKFISH | 0.2 | 2755.1 | 846.6 | 1368.9 | 125.5 | 4.9 | 5101.3 |
| UNSP. ROCKFISH | 3.7 | 0.6 | - | 7.3 | - | - | 11.6 |
| ___ALL ROCKFISH | 21.4 | 3014.7 | 865.7 | 1394.1 | 125.7 | 5.6 | 5427.2 |
| LINGCOD | TR | TR | 0.8 | 0.1 | 0.1 | TR | 1.0 |
| PACIFIC COD | - | TR | TR | - | - | - | TR |
| PACIFIC WHITING | - | - | 112.1 | - | - | - | 112.1 |
| SABLEFISH | - | 2.4 | - | - | - | - | 2.4 |
| ___ALL ROUND FISH | TR | 2.4 | 113.0 | 0.1 | 0.1 | TR | 115.6 |
| OTHER GROUND FISH | - | TR | - | - | - | - | TR |
| ___MISC. GROUND FISH | - | TR | - | - | - | - | TR |
| ALL GROUND FISH | 21.5 | 3017.2 | 978.7 | 1394.2 | 125.8 | 5.6 | 5543.0 |
| ESTIMATED TRAWL HOURS | | | | | | | |
| ALL GROUND FISH | 31 | 1999 | 480 | 510 | 72 | 11 | 3103 |
| METRIC TONS PER TRAWL HOUR | | | | | | | |
| ALL GROUND FISH | 0.69 | 1.51 | 2.04 | 2.73 | 1.75 | 0.51 | 1.79 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR JANUARY 1987 FOR MIDWATER TRAWL

| SPECIES | 3B | 3A | 2C | 2B | TOTAL |
|---------------------|-----|-------|-------|-------|-------|
| DOVER SOLE | - | TR | TR | - | 0.1 |
| PETRALE SOLE | - | 0.1 | 0.1 | - | 0.1 |
| ___ALL FLATFISH | - | 0.1 | 0.1 | - | 0.2 |
| CANARY ROCKFISH | - | 1.2 | - | - | 1.2 |
| REDSTRIPE ROCKFISH | - | - | 0.2 | - | 0.2 |
| YELLOWTAIL ROCKFISH | 0.6 | 2.4 | 0.5 | - | 3.5 |
| ___SEBASTES COMPLEX | 0.6 | 3.6 | 0.7 | - | 4.9 |
| WIDOW ROCKFISH | TR | 245.9 | 219.0 | 154.9 | 619.6 |
| UNSP. ROCKFISH | - | - | - | 0.4 | 0.4 |
| ___ALL ROCKFISH | 0.6 | 249.4 | 219.8 | 155.1 | 624.9 |
| LINGCOD | - | - | - | TR | TR |
| ___ALL ROUND FISH | - | - | - | TR | TR |
| ALL GROUND FISH | 0.6 | 249.6 | 219.8 | 155.2 | 625.2 |

ESTIMATED TRAWL HOURS

| | | | | | |
|-----------------|---|----|----|----|-----|
| ALL GROUND FISH | 4 | 54 | 98 | 83 | 229 |
|-----------------|---|----|----|----|-----|

METRIC TONS PER TRAWL HOUR

| | | | | | |
|-----------------|------|------|------|------|------|
| ALL GROUND FISH | 0.15 | 4.62 | 2.50 | 1.87 | 2.73 |
|-----------------|------|------|------|------|------|

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR FEBRUARY 1987 FOR MIDWATER TRAWL

| SPECIES | 3B | 3A | 2C | 2B | TOTAL |
|----------------------|-----|-------|-------|-------|-------|
| CANARY ROCKFISH | - | 1.0 | - | 0.9 | 2.0 |
| REI-STRIPE ROCKFISH | - | - | 0.1 | - | 0.1 |
| YELLOWTAIL ROCKFISH | 5.6 | 22.5 | - | 1.7 | 29.9 |
| ___SEBASTES COMPLEX | 5.6 | 23.6 | 0.1 | 2.7 | 32.0 |
| WIDOW ROCKFISH | 0.1 | 453.7 | 193.2 | 139.3 | 786.2 |
| UNSP. ROCKFISH | - | - | - | 0.2 | 0.2 |
| ___ALL ROCKFISH | 5.7 | 477.2 | 193.3 | 142.2 | 818.4 |
| OTHER GROUND FISH | - | TR | - | - | TR |
| ___MISC. GROUND FISH | - | TR | - | - | TR |
| ALL GROUND FISH | 5.7 | 477.2 | 193.3 | 142.2 | 818.5 |

ESTIMATED TRAWL HOURS

| | | | | | |
|-----------------|---|-----|----|----|-----|
| ALL GROUND FISH | 9 | 167 | 60 | 80 | 316 |
|-----------------|---|-----|----|----|-----|

METRIC TONS PER TRAWL HOUR

| | | | | | |
|-----------------|------|------|------|------|------|
| ALL GROUND FISH | 0.63 | 2.86 | 3.22 | 1.78 | 2.59 |
|-----------------|------|------|------|------|------|

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR MARCH 1987 FOR MIDWATER TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | TOTAL |
|---------------------|-----|-------|------|-------|-----|-------|
| CANARY ROCKFISH | - | - | 0.2 | 1.7 | - | 1.9 |
| REDSTRIPE ROCKFISH | - | - | 0.3 | - | - | 0.3 |
| YELLOWTAIL ROCKFISH | 1.3 | 21.0 | - | - | - | 22.3 |
| ___SEBASTES COMPLEX | 1.3 | 21.0 | 0.5 | 1.7 | - | 24.4 |
| WIDOW ROCKFISH | TR | 511.9 | 95.6 | 99.8 | 9.6 | 716.8 |
| UNSP. ROCKFISH | - | - | - | 1.0 | - | 1.0 |
| ___ALL ROCKFISH | 1.3 | 532.8 | 96.1 | 102.4 | 9.6 | 742.3 |

| | | | | | | |
|-------------------|---|-----|---|---|---|-----|
| SABLEFISH | - | 2.4 | - | - | - | 2.4 |
| ___ALL ROUND FISH | - | 2.4 | - | - | - | 2.4 |

| | | | | | | |
|-----------------|-----|-------|------|-------|-----|-------|
| ALL GROUND FISH | 1.3 | 535.2 | 96.1 | 102.4 | 9.6 | 744.6 |
|-----------------|-----|-------|------|-------|-----|-------|

ESTIMATED TRAWL HOURS

| | | | | | | |
|-----------------|---|-----|----|----|---|-----|
| ALL GROUND FISH | 3 | 377 | 65 | 29 | 5 | 478 |
|-----------------|---|-----|----|----|---|-----|

METRIC TONS PER TRAWL HOUR

| | | | | | | |
|-----------------|------|------|------|------|------|------|
| ALL GROUND FISH | 0.44 | 1.42 | 1.48 | 3.53 | 1.92 | 1.56 |
|-----------------|------|------|------|------|------|------|

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR APRIL 1987 FOR MIDWATER TRAWL

| SPECIES | 3A | 2C | 2B | 2A | TOTAL |
|---------------------|-------|------|------|------|-------|
| CANARY ROCKFISH | 0.1 | 7.3 | 13.5 | - | 20.9 |
| REI STRIPE ROCKFISH | 3.6 | 0.2 | - | - | 3.8 |
| YELLOWTAIL ROCKFISH | 51.3 | 0.5 | - | - | 51.8 |
| SEBASTES COMPLEX | 55.0 | 7.9 | 13.5 | - | 76.4 |
| WIDOW ROCKFISH | 321.3 | 63.1 | 80.1 | 40.6 | 505.0 |
| ALL ROCKFISH | 376.2 | 71.0 | 93.6 | 40.6 | 581.4 |
| PACIFIC COD | TR | TR | - | - | TR |
| ALL ROUND FISH | TR | TR | - | - | TR |
| ALL GROUND FISH | 376.3 | 71.0 | 93.6 | 40.6 | 581.5 |

ESTIMATED TRAWL HOURS

| | | | | | |
|-----------------|-----|----|----|----|-----|
| ALL GROUND FISH | 272 | 63 | 50 | 29 | 414 |
|-----------------|-----|----|----|----|-----|

METRIC TONS PER TRAWL HOUR

| | | | | | |
|-----------------|------|------|------|------|------|
| ALL GROUND FISH | 1.38 | 1.13 | 1.87 | 1.40 | 1.40 |
|-----------------|------|------|------|------|------|

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR MAY 1987 FOR MIDWATER TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------------|------|-------|------|------|------|------|-------|
| CANARY ROCKFISH | - | 5.0 | - | - | - | - | 5.0 |
| REDSTRIPE ROCKFISH | - | 2.1 | - | - | - | - | 2.1 |
| YELLOWTAIL ROCKFISH | 8.6 | 14.9 | 0.1 | TR | 0.2 | 0.7 | 24.5 |
| ___SEBASTES COMPLEX | 8.6 | 22.0 | 0.1 | TR | 0.2 | 0.7 | 31.6 |
| WIDOW ROCKFISH | 0.1 | 212.5 | 10.0 | 76.7 | 13.5 | 4.9 | 317.6 |
| UNSP. ROCKFISH | 3.7 | - | - | - | - | - | 3.7 |
| ___ALL ROCKFISH | 12.5 | 234.5 | 10.0 | 76.7 | 13.7 | 5.6 | 352.9 |
| LINGCOD | TR | TR | - | - | TR | TR | 0.1 |
| PACIFIC WHITING | - | - | 29.3 | - | - | - | 29.3 |
| ___ALL ROUND FISH | TR | TR | 29.3 | - | TR | TR | 29.3 |
| ALL GROUND FISH | 12.5 | 234.5 | 39.3 | 76.7 | 13.7 | 5.6 | 382.3 |
| ESTIMATED TRAWL HOURS | | | | | | | |
| ALL GROUND FISH | 13 | 168 | 7 | 37 | 10 | 11 | 246 |
| METRIC TONS PER TRAWL HOUR | | | | | | | |
| ALL GROUND FISH | 0.96 | 1.40 | 5.61 | 2.07 | 1.37 | 0.51 | 1.55 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR JUNE 1987 FOR MIDWATER TRAWL

| SPECIES | 3A | 2C | 2B | 2A | TOTAL |
|---------------------|-------|-----|------|------|-------|
| CANARY ROCKFISH | 5.7 | - | - | - | 5.7 |
| REDSTRIPE ROCKFISH | 1.9 | - | - | - | 1.9 |
| YELLOWTAIL ROCKFISH | 14.8 | TR | - | - | 14.8 |
| ___SEBASTES COMPLEX | 22.4 | TR | - | - | 22.4 |
| WIDOW ROCKFISH | 189.5 | 4.2 | 24.7 | 33.1 | 251.6 |
| ___ALL ROCKFISH | 211.9 | 4.3 | 24.7 | 33.1 | 274.0 |
| LINGCOD | - | - | TR | - | TR |
| ___ALL ROUND FISH | - | - | TR | - | TR |
| ALL GROUND FISH | 211.9 | 4.3 | 24.7 | 33.1 | 274.0 |

ESTIMATED TRAWL HOURS

| | | | | | |
|-----------------|-----|---|----|----|-----|
| ALL GROUND FISH | 150 | 4 | 18 | 12 | 183 |
|-----------------|-----|---|----|----|-----|

METRIC TONS PER TRAWL HOUR

| | | | | | |
|-----------------|------|------|------|------|------|
| ALL GROUND FISH | 1.41 | 1.07 | 1.37 | 2.76 | 1.50 |
|-----------------|------|------|------|------|------|

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR JULY 1987 FOR MIDWATER TRAWL

| SPECIES | 3A | 2C | 2B | 2A | TOTAL |
|----------------------|-------|------|------|------|-------|
| CANARY ROCKFISH | 3.8 | - | - | - | 3.8 |
| DARKBLOTCHED ROCKFIS | 0.1 | - | - | - | 0.1 |
| REI/STRIPE ROCKFISH | 0.2 | - | - | - | 0.2 |
| SHARPCHIN ROCKFISH | TR | - | - | - | TR |
| SPLITNOSE ROCKFISH | 0.9 | - | - | - | 0.9 |
| YELLOWTAIL ROCKFISH | 24.5 | - | - | TR | 24.5 |
| OTHER ROCKFISH | 1.0 | - | - | - | 1.0 |
| ___SEBASTES COMPLEX | 30.5 | - | - | TR | 30.5 |
| THORNYHEADS | 0.4 | - | - | - | 0.4 |
| WIDOW ROCKFISH | 237.0 | - | 20.0 | 28.7 | 285.7 |
| ___ALL ROCKFISH | 267.9 | - | 20.0 | 28.7 | 316.6 |
| LINGCOD | - | - | TR | 0.1 | 0.1 |
| PACIFIC WHITING | - | 14.2 | - | - | 14.2 |
| ___ALL ROUND FISH | - | 14.2 | TR | 0.1 | 14.3 |
| ALL GROUND FISH | 267.9 | 14.2 | 20.0 | 28.8 | 330.9 |

ESTIMATED TRAWL HOURS

| | | | | | |
|-----------------|-----|---|---|----|-----|
| ALL GROUND FISH | 209 | 2 | 6 | 16 | 233 |
|-----------------|-----|---|---|----|-----|

METRIC TONS PER TRAWL HOUR

| | | | | | |
|-----------------|------|------|------|------|------|
| ALL GROUND FISH | 1.28 | 7.10 | 3.33 | 1.80 | 1.42 |
|-----------------|------|------|------|------|------|

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR AUGUST 1987 FOR MIDWATER TRAWL

| SPECIES | 3A | 2C | 2B | TOTAL |
|-----------------------|-------|-------|-------|-------|
| CANARY ROCKFISH | 5.4 | - | - | 5.4 |
| DARKBLOTCHED ROCKFISH | 0.1 | - | - | 0.1 |
| REDSTRIPE ROCKFISH | 3.1 | - | - | 3.1 |
| SHARPCHIN ROCKFISH | TR | - | - | TR |
| SILVERGREY ROCKFISH | - | TR | - | TR |
| SPLITNOSE ROCKFISH | 0.9 | - | - | 0.9 |
| YELLOWTAIL ROCKFISH | 34.4 | 0.8 | - | 35.2 |
| OTHER ROCKFISH | 1.0 | - | - | 1.0 |
| ___SEBASTES COMPLEX | 45.0 | 0.9 | - | 45.9 |
| THURNYHEADS | 0.4 | - | - | 0.4 |
| WIDOW ROCKFISH | 245.3 | 82.8 | 178.6 | 506.7 |
| UNSP. ROCKFISH | - | - | 3.2 | 3.2 |
| ___ALL ROCKFISH | 290.6 | 93.7 | 181.8 | 556.1 |
| PACIFIC WHITING | - | 19.5 | - | 19.5 |
| ___ALL ROUND FISH | - | 19.5 | - | 19.5 |
| ALL GROUND FISH | 290.6 | 103.2 | 181.8 | 575.6 |

ESTIMATED TRAWL HOURS

| | | | | |
|-----------------|-----|----|----|-----|
| ALL GROUND FISH | 323 | 41 | 27 | 391 |
|-----------------|-----|----|----|-----|

METRIC TONS PER TRAWL HOUR

| | | | | |
|-----------------|------|------|------|------|
| ALL GROUND FISH | 0.90 | 2.52 | 6.73 | 1.47 |
|-----------------|------|------|------|------|

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR SEPTEMBER 1987 FOR MIDWATER TRAWL

| SPECIES | 3B | 3A | 2C | 2B | TOTAL |
|----------------------|-----|-------|-------|-------|-------|
| BOCACCI0 | - | - | TR | - | TR |
| CANARY ROCKFISH | - | 6.0 | 1.1 | - | 7.1 |
| DARKBLOTCHED ROCKFIS | - | 0.1 | - | - | 0.1 |
| REDSTRIPE ROCKFISH | - | 2.0 | TR | - | 2.0 |
| SHARPCHIN ROCKFISH | - | TR | - | - | TR |
| SILVERGREY ROCKFISH | - | - | 0.1 | - | 0.1 |
| SPLITNOSE ROCKFISH | - | 0.8 | - | - | 0.8 |
| YELLOWTAIL ROCKFISH | 1.3 | 18.8 | 2.3 | - | 22.4 |
| OTHER ROCKFISH | - | 0.9 | - | - | 0.9 |
| ___SEBASTES COMPLEX | 1.3 | 28.6 | 3.5 | - | 33.4 |
| THORNYHEADS | - | 0.3 | - | - | 0.3 |
| WIDOW ROCKFISH | - | 211.9 | 175.1 | 441.4 | 828.5 |
| UNSP. ROCKFISH | - | - | - | 2.5 | 2.5 |
| ___ALL ROCKFISH | 1.3 | 240.8 | 178.6 | 443.9 | 864.7 |
| LINGCOD | - | - | TR | - | TR |
| PACIFIC WHITING | - | - | 14.4 | - | 14.4 |
| ___ALL ROUND FISH | - | - | 14.4 | - | 14.4 |
| ALL GROUND FISH | 1.3 | 240.8 | 193.1 | 443.9 | 879.2 |

ESTIMATED TRAWL HOURS

| | | | | | |
|-----------------|---|-----|-----|-----|-----|
| ALL GROUND FISH | 3 | 225 | 120 | 137 | 485 |
|-----------------|---|-----|-----|-----|-----|

METRIC TONS PER TRAWL HOUR

| | | | | | |
|-----------------|------|------|------|------|------|
| ALL GROUND FISH | 0.45 | 1.07 | 1.61 | 3.24 | 1.81 |
|-----------------|------|------|------|------|------|

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON F*FC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR OCTOBER 1987 FOR MIDWATER TRAWL

| SPECIES | 3A | 2C | 2B | TOTAL |
|---------------------|-------|------|-------|-------|
| BOCACCIO | - | TR | - | TR |
| CANARY ROCKFISH | - | 4.7 | - | 4.7 |
| REI-STRIPE ROCKFISH | - | TR | - | TR |
| YELLOWTAIL ROCKFISH | 6.0 | 0.6 | - | 6.6 |
| OTHER ROCKFISH | 0.2 | - | - | 0.2 |
| ___SEBASTES COMPLEX | 6.3 | 5.3 | - | 11.6 |
| WINDOW ROCKFISH | 126.3 | 2.1 | 152.1 | 280.5 |
| UNSP. ROCKFISH | 0.6 | - | 0.1 | 0.7 |
| ___ALL ROCKFISH | 133.2 | 7.4 | 152.1 | 292.7 |
| LINGCOD | - | 0.8 | - | 0.8 |
| PACIFIC WHITING | - | 18.5 | - | 18.5 |
| ___ALL ROUND FISH | - | 19.3 | - | 19.3 |
| ALL GROUND FISH | 133.2 | 26.6 | 152.1 | 312.0 |

ESTIMATED TRAWL HOURS

| | | | | |
|-----------------|----|----|----|-----|
| ALL GROUND FISH | 55 | 19 | 42 | 116 |
|-----------------|----|----|----|-----|

METRIC TONS PER TRAWL HOUR

| | | | | |
|-----------------|------|------|------|------|
| ALL GROUND FISH | 2.42 | 1.40 | 3.62 | 2.69 |
|-----------------|------|------|------|------|

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMM. GROUND FISH LANDED CATCH (MTONS) FOR NOVEMBER 1997 FOR MIDWATER TRAWL

| SPECIES | 2C | 2B | TOTAL |
|-------------------|------|-----|-------|
| WIDOW ROCKFISH | 1.5 | 1.5 | 3.0 |
| ___ALL ROCKFISH | 1.5 | 1.5 | 3.0 |
| PACIFIC WHITING | 16.3 | - | 16.3 |
| ___ALL ROUND FISH | 16.3 | - | 16.3 |
| ALL GROUND FISH | 17.8 | 1.5 | 19.3 |

ESTIMATED TRAWL HOURS

| | | | |
|-----------------|----|---|----|
| ALL GROUND FISH | 12 | 1 | 12 |
|-----------------|----|---|----|

METRIC TONS PER TRAWL HOUR

| | | | |
|-----------------|------|------|------|
| ALL GROUND FISH | 1.49 | 1.48 | 1.61 |
|-----------------|------|------|------|

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

Preliminary shrimp incidental trawl landings (mt) by International Statistical Area in 1987

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|---------------------|----|----|-----|-----|-----|----|-------|
| Arrowtooth flounder | | | Tr | 8 | 3 | | 11 |
| Dover sole | | Tr | 14 | 18 | 8 | | 41 |
| English sole | | Tr | Tr | Tr | Tr | | 1 |
| Petrale sole | | Tr | Tr | 1 | 1 | | 3 |
| Rex Sole | | Tr | Tr | 1 | Tr | | 1 |
| Rock Sole | | | | | | | |
| Starry flounder | | | | | Tr | | Tr |
| Other flatfish | | Tr | Tr | 3 | Tr | | 3 |
| Rockfish | | 6 | 102 | 309 | 576 | | 993 |
| Lingcod | | 1 | 2 | 13 | 14 | | 30 |
| Pacific cod | | Tr | 2 | 11 | 3 | | 16 |
| Pacific whiting | | | 3 | 3 | | | 6 |
| Sablefish | | Tr | 7 | 10 | 12 | | 29 |
| Spiny dogfish | | | | | | | |
| Other groundfish | | | Tr | Tr | Tr | | Tr |
| Total landings | | 8 | 132 | 377 | 617 | | 1,134 |
| Total deliveries | | - | - | - | - | - | - |

Tr = less than 0.5 mt

Preliminary fish pot landings (mt) by International Statistical Area in 1987

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|---------------------|-----|----|-----|-----|-----|----|-------|
| Arrowtooth flounder | | | | Tr | 2 | | 2 |
| Dover sole | | | Tr | Tr | | | Tr |
| English sole | | | | | | | |
| Petrale sole | | | | | | | |
| Rex Sole | | | | | | | |
| Rock Sole | | | | | | | |
| Starry flounder | | | | | | | |
| Other flatfish | | | Tr | Tr | | | Tr |
| Rockfish | | | Tr | 11 | 2 | | 13 |
| Lingcod | | | Tr | Tr | Tr | | Tr |
| Pacific cod | | | | | | | |
| Pacific whiting | | | | | | | |
| Sablefish | 144 | 66 | 613 | 613 | 253 | | 1,689 |
| Spiny dogfish | | | | | | | |
| Other groundfish | | | | Tr | | | Tr |
| Total landings | 144 | 66 | 613 | 624 | 257 | | 1,704 |
| Total deliveries | 2 | 19 | 168 | 116 | 21 | | 326 |

Tr = less than 0.5 mt

Preliminary jig landings (mt) by International Statistical Area in 1987

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|---------------------|----|-----|----|-----|----|----|-------|
| Arrowtooth flounder | | | | | | | |
| Dover sole | | | | | | | |
| English sole | | | | | | | |
| Petrale sole | | | | | | | |
| Rex Sole | | | | | | | |
| Rock Sole | | | | | | | |
| Starry flounder | | | | Tr | | | Tr |
| Other flatfish | | | | Tr | | | Tr |
| Rockfish | | 64 | 5 | 46 | | | 115 |
| Lingcod | | 16 | 1 | 11 | | | 28 |
| Pacific cod | | | | | | | |
| Pacific whiting | | | | | | | |
| Sablefish | | Tr | | Tr | | | Tr |
| Spiny dogfish | | | | Tr | | | Tr |
| Other groundfish | | 1 | | 2 | | | 3 |
| Total landings | | 81 | 6 | 59 | | | 146 |
| Total deliveries | | 805 | 34 | 791 | | | 1,630 |

Preliminary longline landings (mt) by International Statistical Area in 1987

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|---------------------|----|-----|-----|-----|-----|----|-------------------|
| Arrowtooth flounder | | Tr | 1 | 2 | Tr | | 3 |
| Dover sole | | | Tr | Tr | Tr | | Tr |
| English sole | | | | | | | |
| Petrale sole | | | Tr | Tr | Tr | | Tr |
| Rex Sole | | | | | | | |
| Rock Sole | | | | | | | |
| Starry flounder | | | | Tr | | | Tr |
| Other flatfish | | | | Tr | | | Tr |
| Rockfish | | 38 | 42 | 244 | 70 | | 394 |
| Lingcod | | 16 | 3 | 21 | 1 | | 41 |
| Pacific cod | | Tr | Tr | 1 | 1 | | 2 |
| Pacific whiting | | | | Tr | | | Tr |
| Sablefish | | 56 | 354 | 421 | 171 | | 1,002 |
| Spiny dogfish | | | Tr | Tr | | | Tr |
| Other groundfish | | Tr | Tr | 3 | Tr | | 5 |
| Total landings | | 111 | 400 | 694 | 243 | | 1,448 |
| Total deliveries | | 157 | 151 | 342 | 32 | | 682 |
| Pacific halibut | | 5 | 30 | 83 | 10 | | 128 ^{1/} |

Tr = less than 0.5 mt

^{1/} Does not include 284 mt of Pacific halibut from area 6u (unknown, Alaska)

Preliminary troll landings (mt) by International Statistical Area in 1987

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|---------------------|----|----|----|----|----|----|-------|
| Arrowtooth flounder | | | | Tr | | | Tr |
| Dover sole | | | | | | | |
| English sole | | | | | | | |
| Petrale sole | | | Tr | Tr | | | Tr |
| Rex Sole | | | | | | | |
| Rock Sole | | | | | | | |
| Starry flounder | | | Tr | Tr | | | Tr |
| Other flatfish | | | Tr | Tr | | | Tr |
| Rockfish | Tr | 1 | 32 | 25 | 1 | | 60 |
| Lingcod | | Tr | 8 | 12 | Tr | | 20 |
| Pacific cod | | | | Tr | | | Tr |
| Pacific whiting | | | Tr | Tr | | | Tr |
| Sablefish | | | Tr | Tr | | | Tr |
| Spiny dogfish | | | | | | | |
| Other groundfish | | | Tr | Tr | | | Tr |
| Total landings | Tr | 1 | 41 | 37 | 1 | | 80 |
| Total deliveries | | 10 | 76 | 84 | 1 | | 171 |

Tr = less than 0.5 mt

Preliminary other gear^{1/} landings (mt) by International Statistical Area in 1987

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|---------------------|----|----|-----|-----|----|----|-------|
| Arrowtooth flounder | | | | Tr | | | Tr |
| Dover sole | | | | | | | |
| English sole | | | | | | | |
| Petrale sole | | | | Tr | | | Tr |
| Rex Sole | | | | | | | |
| Rock Sole | | | | | | | |
| Starry flounder | | | | Tr | | | Tr |
| Other flatfish | | | | Tr | | | Tr |
| Rockfish | | 5 | 17 | 89 | | | 110 |
| Lingcod | | 8 | 19 | 13 | | | 41 |
| Pacific cod | | | | | | | |
| Pacific whiting | | | | | | | |
| Sablefish | | | | Tr | | | Tr |
| Spiny dogfish | | | | | | | |
| Other groundfish | Tr | | | Tr | 1 | | 2 |
| Total landings | | 13 | 36 | 103 | 1 | | 153 |
| Total deliveries | | 26 | 144 | 119 | 1 | | 290 |

Tr = less than 0.5 mt

^{1/} Includes scallop dredge, other hook and line, and crab pot