

Year 2000 acceptable biological catch (ABC) and optimum yield (OY) specifications for the Washington, Oregon, and California region by management area (metric tons). (Page 1 of 3)

| ROUNDFISH                        | Final 2000 ABC Recommendations |                     |                       |                     |            | Final 2000 OY            | 1999 OY                                 |
|----------------------------------|--------------------------------|---------------------|-----------------------|---------------------|------------|--------------------------|---|
|                                  | Vancouver <sup>a/</sup>        | Columbia            | Eureka                | Monterey            | Conception | U.S. Total (Total Catch) |   |
| Lingcod <sup>b/</sup>            | 450                            |                     |                       | 250                 |            | 700 <sup>b/</sup>        | 378 <sup>b/</sup> 730                   |
| Pacific cod                      | 3,200                          |                     |                       | <sup>c/</sup>       |            | 3,200                    | NA <sup>c/</sup>                        |
| Whiting <sup>d/</sup>            |                                |                     | 232,000 <sup>d/</sup> |                     |            | 232,000 <sup>d/</sup>    | 232,000 232,000                         |
| Sablefish <sup>e/</sup>          |                                |                     | 9,692 <sup>e/</sup>   |                     |            | 9,692 <sup>e/</sup>      | 7,919 <sup>e/</sup> 7,919               |
| Conception area                  |                                |                     |                       |                     | 472        | 472                      | 472 472                                 |
| ROCKFISH                         | Vancouver                      | Columbia            | Eureka                | Monterey            | Conception | Total                    | Total Catch                             |
| Pacific ocean perch              |                                | 713 <sup>f/</sup>   |                       | <sup>c/</sup>       |            | 713 <sup>f/</sup>        | 270 <sup>f/</sup> 595                   |
| Shortbelly                       |                                |                     | 13,900 <sup>g/</sup>  |                     |            | 13,900                   | 13,900 <sup>g/</sup> 23,500             |
| Widow                            |                                |                     | 5,750 <sup>h/</sup>   |                     |            | 5,750 <sup>h/</sup>      | 4,333 <sup>h/</sup> 5,023               |
| Canary <sup>i/</sup>             |                                |                     | 287 <sup>i/</sup>     |                     |            | 287 <sup>i/</sup>        | 200 <sup>i/</sup> 857                   |
| Chilipepper                      |                                |                     |                       | 3,681 <sup>j/</sup> |            | 3,681 <sup>j/</sup>      | 2,000 <sup>j/</sup> 3,724 <sup>j/</sup> |
| Bocaccio <sup>k/</sup>           |                                | <sup>c/</sup>       |                       | 164                 |            | 164 <sup>k/</sup>        | 100 <sup>k/</sup> 230                   |
| Splitnose <sup>l/</sup>          |                                |                     |                       | 820                 |            | 820                      | 615 <sup>l/</sup> 868                   |
| Yellowtail <sup>m/</sup>         |                                | 3,539               |                       | <sup>c/</sup>       |            | 3,539 <sup>m/</sup>      | 3,539 <sup>m/</sup> 3,435               |
| Thornyheads                      |                                |                     |                       |                     |            |                          |   |
| Shortspine <sup>n/</sup>         |                                | 1,261 <sup>n/</sup> |                       |                     |            | 1,261 <sup>n/</sup>      | 970 <sup>n/</sup> 1,150                 |
| Conception area                  |                                |                     |                       |                     | 175        | 175                      | 175 175                                 |
| Longspine <sup>o/</sup>          |                                | 4,102 <sup>o/</sup> |                       |                     |            | 4,102 <sup>o/</sup>      | 4,102 4,102                             |
| Conception area                  |                                |                     |                       |                     | 429        | 429                      | 429 429                                 |
| Cowcod                           |                                |                     |                       | 19                  | 5          | 24                       | <5 <sup>p/</sup>                        |
| Minor Rockfish N <sup>q/</sup>   |                                | 5,693 <sup>i/</sup> |                       |                     |            | 5,693 <sup>q/</sup>      | 3,814 <sup>q/</sup>                     |
| Minor Rockfish S <sup>r/</sup>   |                                |                     |                       | 3,457               |            | 3,457 <sup>r/</sup>      | 1,899                                   |
| Remaining rockfish <sup>s/</sup> |                                | 3,625               |                       | 680 <sup>s/</sup>   |            |                          |   |
| bank                             |                                | <sup>c/</sup>       |                       | 81                  |            | 81                       | NA                                      |
| black <sup>v/</sup>              |                                | 1,200               |                       |                     |            | 1,200                    | NA                                      |
| blackgill <sup>u/</sup>          |                                | <sup>c/</sup>       |                       | 440 <sup>u/</sup>   |            | 440 <sup>u/</sup>        | NA                                      |
| bocaccio                         |                                | 424                 |                       |                     |            | 424                      | NA                                      |
| chilipepper                      |                                | 43                  |                       |                     |            | 43                       | NA                                      |
| darkblotched                     |                                | 237                 |                       | 19                  |            | 256                      | NA                                      |
| redstripe                        |                                | 768                 |                       | <sup>c/</sup>       |            | 768                      | NA                                      |
| sharpchin                        |                                | 409                 |                       | 60                  |            | 469                      | NA                                      |
| silvergrey                       |                                | 51                  |                       | <sup>c/</sup>       |            | 51                       | NA                                      |
| splitnose                        |                                | 322                 |                       | <sup>c/</sup>       |            | 322                      | NA                                      |
| yelloweye                        |                                | 39                  |                       | <sup>c/</sup>       |            | 39                       | NA                                      |
| yellowmouth                      |                                | 132                 |                       | <sup>c/</sup>       |            | 132                      | NA                                      |
| yellowtail                       |                                |                     |                       | 155                 |            | 155                      | NA                                      |
| Other rockfish <sup>v/</sup>     |                                | 2,068 <sup>v/</sup> |                       | 2,702 <sup>v/</sup> |            |                          | NA                                      |

Final Council recommendations for year 2000 ABC and OY specifications for the Washington, Oregon, and California region by management area (metric tons). (Page 2 of 3)

| FLATFISH                        | Final 2000 ABC Recommendations |          |        |          |            | Total ABC | Final 2000 OY | 1999 OY             |       |
|---------------------------------|--------------------------------|----------|--------|----------|------------|-----------|---------------|---------------------|-------|
|                                 | Vancouver                      | Columbia | Eureka | Monterey | Conception |           | (Total Catch) |                     |       |
| Dover sole <sup>w/</sup>        | 8,373                          |          |        |          |            | 1,053     | 9,426         | 9,426 <sup>w/</sup> | 9,426 |
| English sole                    | 2,000                          |          | 1,100  |          |            |           | 3,100         | NA                  |       |
| Petrale sole                    | 1,450 <sup>x/</sup>            |          | 500    | 800      | 200        |           | 2,950         | NA                  |       |
| Arrowtooth flounder             | 5,800                          |          |        |          |            |           | 5,800         | NA                  |       |
| Other flatfish                  | 700                            | 3,000    | 1,700  | 1,800    | 500        |           | 7,700         | NA                  |       |
| <b>OTHER FISH</b> <sup>y/</sup> | 2,500                          | 7,000    | 1,200  | 2,000    | 2,000      |           | 14,700        | NA                  |       |

a/ ABC applies to the U.S. portion of the Vancouver area, except as noted. For lingcod, the U.S. ABC is set at 44% of the total for the area.

- b/ Lingcod - the rebuilding analysis calculates the probability the northern (Vancouver-Columbia) stock would rebuild within 10 years if various levels of catch occur. The OY is based on the rebuilding plan and is intended as a first step towards rebuilding the stock in the specified time.
- c/ These species are neither common nor important in the areas footnoted. Accordingly, for convenience, Pacific cod in the areas footnoted is included in the non-numerical OY for "other fish." Rockfish species are included in either the "other rockfish" or "remaining rockfish" category for the areas footnoted only.
- d/ Whiting is believed to be at 37% of its unfished biomass. The U.S.-Canada average ABC of 310,000 mt for 1999-2000 is reduced to 290,000 mt following application of the 40-10 default harvest policy, and is based on an MSY proxy of  $F_{40\%}$ . The U.S. portion remains at 80%, or 232,000 mt. The treaty tribes' allocation will be subtracted from the final OY, and the remainder will be allocated 42% to the shore-based sector, 34% to the factory trawler sector, and 24% to the mothership processor sector.
- e/ Sablefish - the 9,692 mt ABC, based on  $F_{35\%}$ , is the same as 1999; the final OY (7,919 mt) is the same as 1999, it is based on  $F_{35\%}$  and application of the default OY (40-10) policy. This OY will apply north of 36° N latitude. The stock is estimated to be at 37% of its unfished level, but there is substantial uncertainty in the biomass estimate. The landed catch equivalent for the northern area will be the total catch OY reduced by 10% for anticipated discard. Ten percent of the northern harvest guideline is set aside for the treaty tribes; the remainder is divided between the limited entry and open access fisheries. The limited entry portion will be allocated 58% to the trawl fishery and 42% to the nontrawl fishery. The ABC and OY for the Conception area (south of 36° N latitude), which are based on historical landings, also remain the same as 1999. There are no limited entry and open access allocations for the Conception area at this time.
- f/ Pacific ocean perch - the ABC for this overfished stock in the combined Vancouver, Columbia, and Eureka areas is based on the 1998 assessment for Vancouver and Columbia (695 mt), plus 18 mt for Eureka. OY is based on calculations in the rebuilding program.
- g/ Shortbelly rockfish remains a virtually unexploited stock, and is difficult to assess quantitatively. The 1989 assessment provided two alternative yield calculations of 13,900 mt and 47,000 mt. NMFS recruitment surveys indicate poor recruitment in most years since 1989, indicating low recent productivity and a naturally declining population. The ABC and OY are, therefore, set at the low end of the range in the assessment, 13,900 mt.
- h/ Widow rockfish - the 5,750 mt ABC, based on the  $F_{40\%}$  harvest rate, is unchanged from 1999. The stock is estimated to be at 29% of its unfished reproductive potential. The final total catch OY (4,333 mt) is based on  $F_{45\%}$  and the 40-10 default OY policy; the commercial total catch target of 4,291 mt is derived by subtracting 42 mt to account for an expected recreational catch. The open access allocation is determined by applying the open access percentage to the commercial total catch target. The limited entry allocation is determined by subtracting the open access allocation. The limited entry allocation is reduced by 300 mt for anticipated bycatch in the offshore whiting fishery, and the remainder is reduced by 16% to account for anticipated bycatch in the non-whiting fisheries, to derive a landed catch equivalent.
- i/ Two canary rockfish assessments addressed the northern and southern portions of the stock. The GMT combined the results, which resulted in a biomass range estimated to be between about 7% of unfished in the south to 20% of unfished in the north. The coastwide ABC (287 mt) is based on the upper end of each assessment, at  $F_{40\%}$ . The coastwide OY is 200 mt (based on the northern assessment). Recreational fisheries are expected to take 80 mt of the OY in 2000. The 1999 canary rockfish OY applied to the Vancouver and Columbia areas only; coastwide landings have been about 1,100 mt in recent years. The stock appears to be overfished, and a rebuilding plan will be required in 2001.
- j/ Chilipepper rockfish - In 1999, the 3,724 mt chilipepper ABC and OY included 43 mt for the Eureka area, which is moved to the northern remaining rockfish ABC in 2000. The 2000 ABC (3,681 mt) for the Monterey and Conception areas is based on the 1998 assessment and application of the  $F_{40\%}$  harvest rate. The stock is estimated to be above the 40% precautionary threshold, so the default OY would equal ABC. However, the Council set OY at 2,000 mt, the recent average landed catch, to reduce bocaccio bycatch.
- k/ For bocaccio in the south, the ABC is based on  $F_{40\%}$  and the OY of 100 mt is based on the rebuilding plan.
- l/ Splitnose rockfish (often called "rosefish") - a separate OY (868 mt) was established for the Eureka-Monterey-Conception area in 1999, equal to ABC. For year 2000, the southern ABC applies only to the Conception and Monterey areas. Accordingly, the southern ABC of 820 mt is derived by subtracting 48 mt for the Eureka area, and the northern ABC is increased by that 48 mt. The northern ABC for the Vancouver-Columbia-Eureka

- area is 322 mt. The 615 mt OY for the southern area reflects a 25% precautionary adjustment because of the less-rigorous assessment for this stock. In the north, splitnose is included in the minor rockfish OY.
- m/ Yellowtail rockfish - the ABC recommendation (3,539 mt) applies to the Eureka, Columbia, and U.S. portion of the Vancouver areas. The stock is estimated to be at 39% of its unfished level. The final OY recommendation is based on  $F_{40\%}$  and application of the 40-10 policy. A landed catch equivalent for commercial fishers will be based on a 16% discard reduction for landings in the limited entry fishery and subtraction of anticipated discard in the at-sea fisheries for Pacific whiting.
  - n/ Shortspine thornyhead is estimated to be at 32% of its unfished level. The ABC (1,261 mt) for the area north of 36°N latitude (Vancouver through Monterey areas) is the same as 1999, calculated based on a synthesis of two stock assessments prepared in 1998 and application of the  $F_{35\%}$  harvest rate. The 970 mt OY is based on  $F_{40\%}$  and the 40-10 policy. A separate ABC and OY (based on historical catch) have been established for the part of the Conception area north of Point Conception in recent years. There is no ABC or OY for the southern Conception area.
  - o/ Longspine thornyhead - the ABC (4,102 mt) north of the Conception area is the same as in 1999, based on the average of the 3-year individual ABCs at  $F_{35\%}$ . The stock is estimated to be above the 40% precautionary threshold. The landed catch equivalent will reflect a 5% reduction to account for market discard. The ABC and OY for the Conception area apply north of Point Conception. The southern Conception area has neither an ABC or OY.
  - p/ Cowcod - the 1999 assessment of the Conception area indicates this stock is overfished, with abundance below 10% of the unfished level. The Council recommends ABC in the Conception area be 5 mt (based on the assessment) and 19 mt in the Monterey area (based on average landings from 1983-1997). The OY for the Monterey and Conception areas is no more than 5 mt in 2000.
  - q/ Minor Rockfish (north) - this new category includes the "Remaining Rockfish" and "Other Rockfish" categories in the U.S. Vancouver, Columbia, and Eureka areas combined. The "remaining rockfish" category includes the rockfish species that have been assessed by less-vigorous methods than stock synthesis, except for black rockfish. The "other rockfish" category includes the rockfish that have never been assessed. The total catch OY is the sum of 75% of the "remaining rockfish" total plus 50% of the "other rockfish." The reduction in the contribution of remaining and other rockfish is intended to address uncertainty in stock status due to limited information.
  - r/ Minor Rockfish (south) - this new category includes the "Remaining Rockfish" and "Other Rockfish" categories in the Monterey and Conception areas combined. The ABC is the sum of all those individual species ABCs in the two areas. The total catch OY is the sum of 75% of the "remaining rockfish" ABC plus 50% of the "other rockfish" ABC. This precautionary reduction reflects the extremely limited information on most rockfish species.
  - s/ Remaining rockfish includes all rockfish species below in the table except the "other rockfish" category; 75 mt of the blackgill rockfish ABC is included in the "other rockfish" category.
  - t/ Black rockfish: this 1,200 mt is the sum of the ABC calculated for the assessment area (700 mt) plus the average catch in the unassessed area (500 mt). This stock contributes 950 mt towards the Minor rockfish OY in the north: 700 mt for the assessed area and 50% of the unassessed area. The 50% reduction is a precautionary adjustment consistent with other recommendations.
  - u/ Blackgill rockfish - the 1998 stock assessment estimates the Conception area stock to be at about 51% of pristine levels with 365 mt as the ABC based on  $F_{40\%}$ ; 75 mt was added for the Monterey area and is included in the "other rockfish" total below. Upon completion of the Conception area assessment in 1998, the ABC for that portion of the stock was moved from the "other rockfish" category to the "remaining rockfish" category. If annual landings reach 300 mt, the GMT will alert the Council to the possible need for management action or a stock assessment.
  - v/ Other rockfish includes rockfish species of the genus *Sebastes* not identified above in this table. The ABC recommendation is based on the 1996 *Sebastes* complex review of commercial landings and includes an estimate of recreational landings. These species have never been formally assessed.
  - w/ Dover sole - The 1997 assessment evaluated the resource north of 36° N latitude as a unit, and provided an ABC for landed catch based on the  $F_{35\%}$  harvest rate. The Conception area ABC is at the level established in the original FMP. The ABCs represent total catch, and were converted by estimating that 5% of the total catch is discarded. Therefore, the coastwide ABC and OY of 9,426 mt are for total catch with a landed catch equivalent of 8,955 mt.
  - x/ Petrale sole - The 1999 assessment calculates the ABC in the Vancouver and Columbia areas at 1,447 mt, which is rounded to 1,450 mt. The stock size has been increasing and is estimated to be at 42% of its unfished size in 1999. The coastwide ABC (2,950 mt) is the sum of the areas.
  - y/ Includes sharks, skates, rays, ratfish, morids, grenadiers, and other groundfish species noted above in c/.