

Oregon

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DEPARTMENT OF
FISH AND
WILDLIFE

FISH DIVISION

Dr. Doyle Hanan
Chair, Coastal Pelagic Species Management Team
California Dept. Fish and Game
Marine Resources Div.
PO Box 271
La Jolla, CA 92038

Dear Dr. Hanan;

With the implementation of the new Coastal Pelagic Species Fishery Management Plan and the inclusion of Oregon and Washington sardine landings under the harvest guideline, members of the Oregon sardine industry are interested in establishing a separate allocation of the harvest guideline for the area north of California. We are interested in pursuing this subject and have prepared the attached summary paper to open the discussion. The Management Plan does allow for additional allocations and we would like the Pelagic Species Management Team to discuss the issue as we plan to introduce a proposal at a future Council meeting. We are open to team recommendations regarding the issue of re-allocation of the harvest guideline in the fall. Thank you for your consideration of this matter.

Sincerely,

A handwritten signature in cursive script that reads "Burnell Bohn".

Burnell Bohn
Fish Division

cc: L.B. Boydston, CDFG
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D. Waldeck, PFMC
J. Bornstein, Bornstein Seafoods, Inc.
Oregon sardine permit holders

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ALLOCATION OF PACIFIC SARDINE HARVEST GUIDELINE

Background

Prior to 2000, sardines were managed by the individual states. There has been no fishery in Oregon or Washington since the late 1940's. In the recent years, California has managed their sardine fishery under an annual harvest quota. The quota was divided two-thirds to the southern California fishery and one-third to the northern fishery (a dividing line at San Simeon Point, San Luis Obispo County, approximately 35° 40'N). In addition, in October, any uncaught portion of the quota was re-allocated, 50/50, between the north and south areas (PFMC 1998).

Since 1993, the quota was based on biomass estimates calculated using the CANSAR model. The model uses both fishery-dependant and fishery-independent data to obtain annual estimates of sardine abundance, year class strength, and age-specific fishing mortality (Hill et.al. 1999a). Beginning with the 1998 quota, the model was modified (CANSAR-TAM) to account for sardines that were outside the range of the fishery (north or offshore)(Figure 1), calculating biomass estimates for both within and outside the range of the fishery and survey data. Even though data from outside the range of the fishery and survey data were used in calculating the biomass estimates, the quota was based on the biomass of sardines within the range of the fishery (Table 1 - "inside area")(Hill et al 1999a).

In 1999, amendment 8 to the Pacific Fishery Management Council's Northern Anchovy Fishery Management Plan (FMP) was approved, to take effect in 2000. The plan is now the Coastal Pelagic Species Fishery Management Plan, and includes sardines. Under the FMP, The harvest guideline for sardines is calculated and allocated in a similar manner as it was in California, with two changes: 1) the northern border for the northern area is extended to the Washington/Canada border. The division between northern and southern areas continues to be Point Piedreas Blancas (35°40'N) and the unused harvest guideline will still be re-allocated in October (PFMC 1998). 2) The harvest guideline is based on the biomass estimate of the entire management area under the FMP (Table 1 - "total area")(Hill 1999b).

The first major landings of sardines into Oregon in fifty years occurred in 1999. Three vessels made directed landings of just over 1.7 million pounds (775.7 mt). In Oregon, sardines are managed under the Developmental fishery program which limits the number of harvest permits to 15. In 1999, as of mid-July, only three permits had been issued; by mid-August, all 15 permits were issued. In 2000, ten permits were renewed from 1999 and the other five permits were issued through a lottery in February. Harvest is expected to begin in late spring/early summer.

Situation

Historically, the bulk of sardine landings off Oregon occurred in July through September (OFC 1951). Members of the Oregon industry feel any new fishery will occur in the same general time frame. Their concern is, if they share a portion of the harvest guideline with the northern California fishery, that fishery will have an opportunity to harvest a significant portion of the harvest guideline before the fishery off Oregon begins for the year. Presently, this may not be a major problem. Given the high biomass and harvest guideline in the last few years, the fishery off northern California has not harvested their entire portion of the quota. Also, presently, the bulk of their fishery doesn't begin until June/July. However, if the biomass begins to decrease or the nature of the northern California fishery changes (i.e. reduction is allowed), there is potential for

the northern California fishery to harvest a significant portion of the harvest guideline before the fishery off Oregon begins for the year. The Oregon industry is investing a lot of money to upgrade facilities to process sardines and would like to be assured of some amount of product in the future. Also, since the estimated biomass on which the harvest guideline is based, now includes sardines north of California, the Oregon industry feels part of the harvest should be allocated to fisheries north of California. Data for sardines north of California are limited but will improve as a fishery develops.

Options to allocate a portion of the sardine harvest guideline to area north of California.
The numbers in the examples below are based on 2000 data.

Option A. Status quo - total harvest guideline is based on biomass of total area, split 66/33 between S area/ N area (N area includes northern California, Oregon, and Washington).

| | Biomass (mt) | Harvest guideline (mt) | | | |
|-------|--------------|------------------------|---------|--------|-------|
| | | Total | SCA | NCA | OR/WA |
| Total | 1,581,346 | 186,791 | 124,527 | 62,264 | |

Option B. Since the OR/WA area is similar in size to the northern California area, and the southern California area portion of the harvest guideline has historically been twice that of northern California, the total harvest guideline could be split 50% southern California, 25% northern California, and 25% OR/WA.

| | Biomass (mt) | Harvest guideline (mt) | | | |
|-------|--------------|------------------------|--------|--------|--------|
| | | Total | SCA | NCA | OR/WA |
| Total | 1,581,346 | 186,791 | 93,396 | 46,698 | 46,698 |

Option C. The harvest guideline for the area off California as a whole could be calculated as it has until this year: based on the estimated biomass for the "inside area" and split 66/33 between southern California and northern California. The harvest guideline for the area north of California could then be based on some portion (ie. 50%) of the differences between the harvest guideline for the "inside area" and the total area".

| | Biomass (mt) | Harvest guideline (mt) | | | |
|---------|--------------|----------------------------------|--------|--------|---------------------------|
| | | Total | SCA | NCA | OR/WA |
| Total | 1,581,346 | 186,791 | | | |
| Inside | 1,058,807 | 118,599 | 79,106 | 39,493 | |
| outside | | 186,791 - 118,599 = 68,192 | | | 34,096 (50% of 68,192) |

Option C would be more conservative for the stocks. Both B and C retain similar historical proportions between the areas, i.e. southern California receives the major portion of the harvest guideline, and twice that of northern California. We prefer option C because, in addition to retaining historical proportions, it is a simple formula there is no reliance on "inside/outside" distinctions of the biomass.

B

References

Hill, K.T., L.D. Jacobson, N.C.H. Lo, M. Yaremko, and M. Dege. 1999a. Stock assessment of Pacific sardine for 1998 with management recommendations for 1999. California Dept. Fish and Game. Marine Region Admin. Rpt. 99-4. 30pp.

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OFC. 1951. Fishery statistics of Oregon. Oregon Fish Commission, Contribution No. 16.

PFMC. 1998. Amendment 8 (to the northern anchovy fishery management plan) incorporating a name change to: the coastal pelagic species fishery management plan. Pacific Fishery Management Council, Portland, OR.

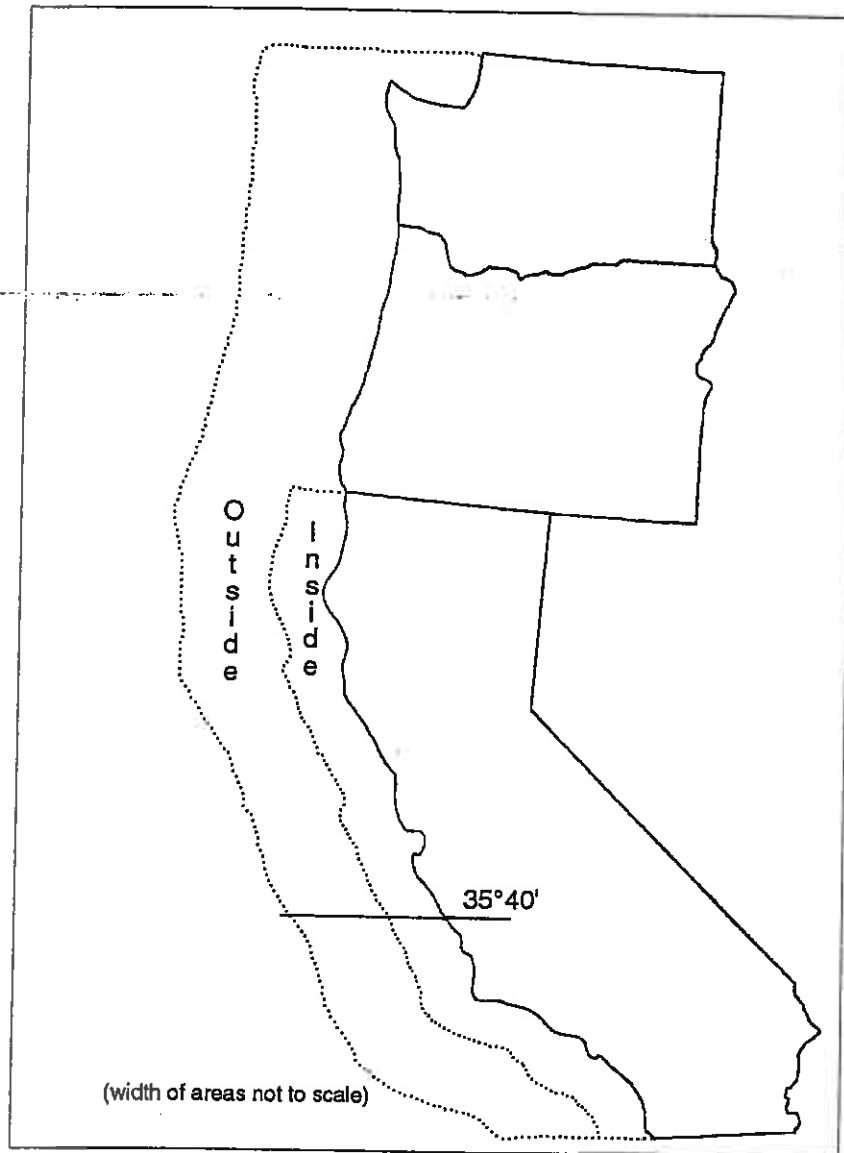


Figure 1. Representation of inside and outside areas used in calculating sardine biomass estimate.

Table 1. Biomass estimates, harvest guidelines or quotas, and total landings for sardines, 1995-2000.

| Year | Biomass estimate (mt) ^a | | | Initial harvest guideline or quota (mt) | | | Total Landings (mt) | | |
|------|------------------------------------|--------------|------------------|-----------------------------------------|---------------|----------------------------|---------------------|---------------|----------------------------|
| | inside area | outside area | total area | total | southern area | northern area ^b | total | southern area | northern area ^b |
| 1995 | 330,493 | | 330,493 | 47,306 | 31,538 | 36,562 | 41,480 | 36,562 | 4,928 |
| 1996 | 320,909 | | 320,909 | 31,818 | 21,212 | 10,606 | 34,128 | 25,224 | 8,904 |
| 1997 | 462,664 | | 462,664 | 48,988 | 32,658 | 16,329 | 43,632 | 32,785 | 10,847 |
| 1998 | 420,847 | 151,093 | 571,940 | 43,545 | 29,030 | 14,515 | 41,056 | 31,975 | 9,081 |
| 1999 | 1,073,091 | 544,825 | 1,617,916 | 120,474 | 80,356 | 40,118 | 56,322 | 42,440 | 13,882 |
| 2000 | 1,058,807 | 522,539 | 1,581,346 | 186,791 | 124,527 | 62,264 | | | |

^a The bold type was the biomass used to calculate the harvest guideline or quota.

^b Prior to 2000, the northern area was only northern California. Beginning in 2000, the northern area included Oregon and Washington.