

Table 1. History of Council Actions

- The Council initiated development of the FMP for Northern anchovy in January of 1977. The FMP was submitted to the U.S. Secretary of Commerce (Secretary) in June of 1978. Regulations implementing the FMP were published in the *Federal Register* on September 13, 1978 (43FR40868). Subsequently, the Council has considered seven amendments.
- The first amendment changed the method of specifying the domestic annual harvest for Northern anchovy and added a requirement for an estimate of domestic processing capacity and expected annual level of domestic processing. Approval for this amendment was published in the *Federal Register* on July 18, 1979 (44FR41806).
- The second amendment, which became effective on February 5, 1982, was published in the *Federal Register* on January 6, 1982 (47FR629). The purpose of this amendment was to increase the domestic fishing fleet's opportunity to harvest the entire optimum yield (OY) of Northern anchovy from the U.S. EEZ by releasing, inseason, unutilized portions of the Northern quota.
- During the spring of 1982, the Council considered a third amendment that divided the quota for Northern anchovy into two halves and made release of the second half conditional on the results of a mid-season review of the status of the stock. The methods proposed for the mid-season assessment were considered too complex to implement, and the amendment was not approved.
- The fourth amendment, which had two parts, was published in the *Federal Register* on August 2, 1983 (48FR34963) and became effective on August 13, 1983. The first part abolished the five-inch size limit in the commercial fishery and established a minimum mesh size of 5/8 inch for Northern anchovy. The mesh size requirement did not become effective until April 1986 in order to give the fleet additional time to comply without undue economic hardship. The second part established a mid-season quota evaluation that was simpler in design than the method proposed in Amendment 3.
- The fifth amendment in 1983 incorporated advances in scientific information concerning the size and potential yield of the central subpopulation of Northern anchovy. In addition, the fifth amendment included changes to a variety of other management measures. Two or more alternative actions were considered in each of seven general categories; (1) OY and harvest quotas; (2) season closures; (3) area closures; (4) quota allocation between areas; (5) the reduction quota reserve; (6) minimum fish size or mesh size; and (7) foreign fishing and joint venture regulations. The alternatives for the fifth amendment were reviewed by the Council during 1983. The final rule was published in the *Federal Register* on March 14, 1984 (49FR9572).
- In 1990, the sixth amendment implemented a definition of overfishing for Northern anchovy consistent with National Standard 7, and addresses vessel safety (56FR15299, April 16, 1991).

- The Council began developing the seventh amendment as a new FMP for CPS on a motion from NMFS and California in 1990. A complete draft was available in November of 1993, but the Council suspended further work, because NMFS withdrew support due to budget constraints. In July of 1994, the Council decided to proceed with the plan through the public comment period. NMFS agreed with the decision on the condition that the Council also consider the options of dropping or amending the anchovy FMP. Thus, four principal options were considered for managing CPS (1) drop the anchovy FMP (no federal or Council involvement in CPS); (2) continue with the existing FMP for anchovy (status quo); (3) amend the FMP for Northern anchovy; and (4) implement an FMP for the entire CPS fishery. In March of 1995, the Council decided to proceed with the FMP for CPS. Final action was postponed until June 1995 when the Council adopted a draft plan that had been revised to address comments provided by NMFS and the SSC. Amendment 7 was submitted to the Secretary, but rejected by NMFS, Southwest Region, as being inconsistent with National Standard 7. NMFS announced its intention to drop the FMP for Northern anchovy (in addition to FMP's other species) in the *Federal Register* on March 26, 1996 (61FR13148), but the action was never completed.
- Development of Amendment 8 began in June, 1997 when the Council directed the CPSPDT to amend the FMP for Northern anchovy to conform to the recently revised Magnuson-Stevens Fishery Conservation and Management Act and to expand the scope of the FMP to include the entire CPS fishery. Amendment 8 was partially approved by the U.S. Secretary of Commerce on June 10, 1999, and final regulations were published on December 15, 1999 (64FR69888). The FMP was implemented on January 1, 2000.
- At its meeting in June 1999, the Council directed its Coastal Pelagic Species Management Team (CPSMT) to recommend appropriate revisions to the FMP and report to the Council the following September. A public meeting of the CPSMT was held in La Jolla, California, on August 3 and 4, 1999, and August 24, 1999, and a meeting was held between the CPSMT and the Coastal Pelagic Species Advisory Subpanel on August 24, 1999. At its September 1999 meeting, the Council gave further direction to the CPSMT regarding MSY for squid. At its March 2000 meeting, the Council asked the CPSMT for a more thorough analysis of the alternatives proposed for establishing MSY for squid and for bycatch. At a public meeting in La Jolla, California, on April 20 and 21, 2000, the CPSMT reviewed comments from the Council, the Council's Scientific and Statistical Committee (SSC) and prepared additional material for establishing MSY for squid based on spawning area.
- The Council distributed Amendment 9 for public review on July 27, 2000. At its September 2000 meeting, the Council reviewed written comments, received comments from its advisory bodies, and heard public comments, and decided to submit only two provisions for Secretarial review. Based on testimony concerning MSY for squid, the Council decided to include in Amendment 9 only the bycatch provision and a provision providing a framework to ensure that Indian fishing rights are implemented according to treaties between the U.S. and the specific tribes. Since implementation of the FMP, the CPS fishery has expanded to Oregon and Washington. As a result, the FMP must discuss Indian fishing rights in these areas. These rights were not included in the FMP; and the Council decided to address this issue in Amendment 9. The Council decided to conduct further analysis of the squid resource and will prepare a separate amendment that addresses OY and MSY for squid.

- The Secretary of Commerce approved Amendment 9 on March 22, 2001.
- In April 2001, the Council adopted the capacity goal and transferability provisions recommended by the CPSMT for inclusion in Amendment 10. The Council directed the CPSMT to develop an amendment to the CPS FMP that will include the capacity goal, provisions for permit transferability, a process for monitoring fleet capacity relative to the goal, and a framework for modifying transferability provisions as warranted by increases or decreases in fleet capacity. The amendment will also address determination of OY and MSY for market squid.
- In November 2001, the Council reviewed the findings of the market squid stock assessment review (STAR) workshop and endorsed the egg escapement approach as a proxy for squid MSY, as recommended by the market squid STAR Panel and CPSMT.
- In March 2002, the Council adopted draft Amendment 10 to the CPS FMP for public review.
- In June 2002, the Council adopted Amendment 10 to the CPS FMP.
- December 30, 2002, the Secretary of Commerce approved Amendment 10. On January 27, 2003 NMFS issued the final rule and regulations for implementing Amendment 10.
- September 2002, the Council requested NMFS take emergency action to reallocate the unharvested portion of the harvest guideline prior to October 1. The Council believed this action would minimize negative economic impacts in the northern fishery without causing market disruptions in the southern fishery. On September 26, 2002, through an emergency rule, NMFS reallocated the remaining Pacific sardine harvest guideline and reopened the northern subarea fishery, which had been closed on September 14, 2002.
- September 2002, the CPSAS recommended the Council initiate a regulatory or FMP amendment and direct the CPSMT to prepare management alternatives for revising the sardine allocation framework. The Council directed the CPSMT to review CPSAS recommendations for revising the allocation framework. A public meeting of the CPSMT was held on October 8, 2002. The CPSMT discussed information needs and prospective analyses for developing allocation management alternatives.
- On October 30, 2002, the Council initiated a regulatory amendment to address allocation problems.
- The CPSMT met January 30-31, 2003 to analyze various alternatives for revising the allocation framework and developed recommendations for Council consideration.
- At the March 2003 Council meeting, the SSC and CPSAS reviewed analyses of the proposed management alternatives for sardine allocation. Based on the advisory body recommendations and public comment, the Council adopted five allocation management alternatives for public review.
- At the April 2003 Council meeting, the CPSAS reviewed the five management alternatives and

developed recommendations for the Council. The Council took final action on the regulatory amendment. The proposed action adopted by the Council would (1) change the definition of subarea A and subarea B by moving the geographic boundary between the two areas from 35° 40' N latitude to 39° N latitude, (2) move the date when Pacific sardine that remains unharvested is reallocated to Subarea A and Subarea B from October 1 to September 1, (3) change the percentage of the unharvested sardine that is reallocated to Subarea A and Subarea B from 50 percent to both subareas to 20 percent to Subarea A and 80 percent to Subarea B, and (4) reallocate all unharvested sardine that remains on December 1 coast wide. The Council's intent is for this interim revision to the allocation framework be in effect for the 2003 and 2004 seasons. The allocation regime could be extended to 2005 if the 2005 harvest guideline were at least 90% of the 2003 harvest guideline.

- The regulatory amendment for allocation of the Pacific sardine harvest guideline was approved on August 29, 2003. The final rule implementing the regulatory amendment was published September 4, 2003 (68FR52523).

Table 2. Regulatory Actions

January 25, 2000. NMFS published harvest guidelines for Pacific sardine and Pacific mackerel for the fishing year beginning January 1, 2000. A harvest guideline of 186,791 mt was established for Pacific sardine, based on a biomass estimate of 1,581,346 mt. The harvest guideline was allocated for Subarea A, which is north of 35° 40' N latitude (Point Piedras Blancas) to the Canadian border, and for Subarea B, which is south of 35° 40' N latitude to the Mexican border. The northern allocation was 62,264 mt; the southern allocation was 124,527 mt. The sardine harvest guideline was in effect until December 31, 2000, or until it was reached and the fishery closed. A harvest guideline of 42,819 mt was established for Pacific mackerel based on a biomass estimate of 239,286 mt. The harvest guideline for Pacific mackerel was in effect until June 30, 2000, or until it was reached and the fishery closed. (65FR3890)

September 11, 2000. NMFS announced the annual harvest guideline for Pacific mackerel in the exclusive economic zone (EEZ) off the Pacific Coast. Based on the estimated biomass of 116,967 mt and the formula in the FMP, a harvest guideline of 20,740 mt was calculated for the fishery beginning on July 1, 2000. This harvest guideline is available for harvest for the fishing season July 1, 2000, through June 30, 2001. (65FR54817)

November 1, 2000. NMFS announced the closure of the directed fishery for Pacific mackerel in the EEZ off the Pacific Coast on October 27, 2000. The FMP and its implementing regulations require NMFS to set an annual harvest guideline for Pacific mackerel based on a formula in the FMP and to close the fishery when the harvest guideline is reached. The harvest guideline of 20,740 mt is projected to be reached before the end of the fishing season on June 30, 2001, which requires closing the directed fishery and setting an incidental harvest limit for Pacific mackerel so that the harvest of other coastal pelagic species will not be further restricted. The intended effect of this action is to ensure conservation of the Pacific mackerel resource. For the reasons stated here and in accordance with the FMP and its implementing regulations at 50 CFR 660.509, the directed fishery for Pacific mackerel will be closed October 27, 2000, after which time no more than 20% by weight of any landing of Pacific sardine may be Pacific mackerel. (65FR65272)

November 17, 2000. NMFS published a correction to the Pacific mackerel closure which was published on November 1, 2000. In 65FR65272, make the following correction: On page 65272, in the third column, under the heading SUPPLEMENTARY INFORMATION, the last sentence is corrected to read as follows: "For the reasons stated here and in accordance with the FMP and its implementing regulations at 50 CFR 660.509, the directed fishery for Pacific mackerel will be closed October 27, 2000, after which time no more than 20% by weight of a landing of Pacific sardine, northern anchovy, jack mackerel, or market squid may consist of Pacific mackerel." (65FR69483)

December 27, 2000. NMFS announced the annual harvest guideline for Pacific sardine in the EEZ off the Pacific Coast for the January 1, 2001, through December 31, 2001, fishing season. This harvest guideline has been calculated according to the regulations implementing the FMP. The intended effect of this action is to establish allowable harvest levels for Pacific sardine off the Pacific Coast. Based on the estimated biomass of 1,182,465 mt and the formula in the FMP, a harvest guideline of 134,737 mt was calculated for the fishery beginning January 1, 2001. The harvest guideline is allocated one-third for Subarea A, which is north of 35° 40' N latitude (Point Piedras

Blancas) to the Canadian border, and two-thirds for Subarea B, which is south of 35° 40' N latitude to the Mexican border. Any unused resource in either area will be reallocated between areas to help ensure that the optimum yield will be achieved. The northern allocation is 44,912 mt; the southern allocation is 89,825 mt. (65FR81766)

February 22, 2001. NMFS announced changes to the restriction on landings of Pacific mackerel for individuals participating in the CPS fishery and for individuals involved in other fisheries who harvest small amounts of Pacific mackerel. The incidental limit on landings of 20% by weight of Pacific mackerel in landings of Pacific sardine, northern anchovy, jack mackerel, and market squid remains in effect; however, CPS fishermen may land up to 1 mt of Pacific mackerel even if they land no other species from the trip. Non-CPS fisherman may land no more than 1 mt of Pacific mackerel per trip. After the harvest guideline of 20,740 mt is reached, all landings of Pacific mackerel will be restricted to 1 mt per trip. This action is authorized by the FMP and is intended to ensure that the fishery achieves, but does not exceed, the harvest guideline while minimizing the economic impact on small businesses. For the reasons stated here, no fishing vessel may land more than 1 mt of Pacific mackerel per fishing trip, except that fishing vessels with other CPS on board may land more than 1 mt of Pacific mackerel in a fishing trip if the total amount of Pacific mackerel on board the vessel does not exceed 20% by weight of the combined weight of all CPS on board the vessel. (66FR11119)

March 30, 2001. NMFS announced the closure of the fishery for Pacific mackerel in the EEZ off the Pacific Coast at 12:00 a.m. on March 27, 2001. The FMP and its implementing regulations require NMFS to set an annual harvest guideline for Pacific mackerel based on a formula in the FMP and to close the fishery when the harvest guideline is reached. The harvest guideline of 20,740 mt has been reached. Following this date no more than 1 mt of Pacific mackerel may be landed from any fishing trip. The effect of this action is to ensure conservation of the Pacific mackerel resource. (66FR17373)

July 25, 2001. NMFS announced a harvest guideline of 13,837 mt for Pacific mackerel for the fishing season July 1, 2001 through June 30, 2002. A directed fishery of 6,000 mt was established, which, when attained, would be followed by an incidental allowance of 45% of Pacific mackerel in a landing of any coastal pelagic species. If a significant amount of the harvest guideline remained unused before the end of the fishing season on June 30, 2002, the directed fishery would be reopened. This approach was taken because of concern about the low harvest guideline's potential negative effect on the harvest of Pacific sardine if the fishery for Pacific mackerel had to be closed. The two species occur together often and could present incidental catch problems. (66FR38571)

November 27, 2001. NMFS announced the closure of the directed fishery for Pacific mackerel in the EEZ off the Pacific Coast at 12:00 noon on November 21, 2001. For the fishing season beginning July 1, 2001, 6,000 mt of the 13,837 mt harvest guideline was established for a directed fishery. More than 6,000 mt has been landed. Therefore, the directed fishery for Pacific mackerel was closed on November 21, 2001, after which time no more than 45% by weight of a landing of Pacific sardine, northern anchovy, jack mackerel, or market squid could consist of Pacific mackerel. The intended effect of this action was to ensure that the harvest guideline was achieved, but not exceeded, and to minimize bycatch of Pacific mackerel while other CPS were being harvested. (66FR59173)

December 27, 2001. NMFS published the harvest guideline for Pacific sardine for the fishing season beginning January 1, 2002. A harvest guideline of 118,442 mt was established for Pacific sardine based on a biomass estimate of 1,057,599 mt. The harvest guideline is allocated for Subarea A, which is north of 35° 40' N latitude (Point Piedras Blancas) to the Canadian border, and for Subarea B, which is south of 35° 40' N latitude to the Mexican border. The northern allocation is 39,481 mt; the southern allocation is 78,961mt. The sardine harvest guideline is in effect until December 31, 2002, or until it is reached and the fishery closed. (66FR66811)

April 5, 2002. NMFS announced the reopening of the directed fishery for Pacific mackerel in the U.S. EEZ off the Pacific Coast on April 1, 2002. A significant portion of the Pacific mackerel harvest guideline remains unharvested (6,585 mt). Therefore, the incidental catch allowance that has been in effect since November 21, 2001 is removed, and any landing of Pacific mackerel may consist of 100% Pacific mackerel. This action was taken to help ensure that the harvest guideline is attained. If the harvest guideline is projected to be reached before June 30, 2002, the directed fishery will be closed and an appropriate incidental landing restriction imposed. (67FR16322)

July 11, 2002. NMFS proposed a regulation to implement the annual harvest guideline for Pacific mackerel in the EEZ off the Pacific Coast. The CPS FMP and its implementing regulations require NMFS to set an annual harvest guideline for Pacific mackerel based on the formula in the FMP. This action proposes allowable harvest levels for Pacific mackerel off the Pacific Coast. Based on the estimated biomass of 77,516 mt and the formula in the FMP, a harvest guideline of 12,456 is proposed for the fishery beginning on July 1, 2002, and continue through June 30, 2003, unless the harvest guideline is attained and the fishery closed before June 30. (67FR45952)

September 18, 2002. NMFS announced the closure of the fishery for Pacific sardine in the U.S. EEZ off the Pacific Coast north of Point Piedras Blancas, California, (35° 40' N latitude) at 0001 hrs local time on September 14, 2002. The closure will remain in effect until the reallocation of the remaining portion of the coast wide harvest guideline is required by the CPS FMP. That reallocation is expected to occur on or about October 1, 2002. The purpose of this action is to comply with the allocation procedures mandated by the FMP. (67FR58733)

September 26, 2002. Emergency rule. NMFS announced the reallocation of the remaining Pacific sardine harvest guideline in the U.S. EEZ off the Pacific Coast. The CPS FMP requires that NMFS conduct a review of the fishery 9 months after the beginning of the fishing season on January 1, and reallocate any unharvested portion of the harvest guideline, with 50% allocated north and south of Point Piedras Blancas, California. The allocation north of Point Piedras Blancas was reached on September 14, 2002, and the fishery was closed until the scheduled time for reallocation on October 1, 2002. This action reallocates the remainder of the harvest guideline earlier than the date specified in the FMP in order to minimize the negative economic effects on fishing and processing, primarily in the Pacific Northwest, that would result from delaying the reallocation. (67FR60601)

October 3, 2002. NMFS issued a regulation to implement the annual harvest guideline for Pacific mackerel in the EEZ off the Pacific Coast. The CPS FMP and its implementing regulations require NMFS to set an annual harvest guideline for Pacific mackerel based on the formula in the FMP. This action is to conserve Pacific mackerel off the Pacific Coast. Based on the estimated biomass of 77,516 mt and the formula in the FMP, a harvest guideline of 12,456 is proposed for the fishery

beginning on July 1, 2002, and continue through June 30, 2003, unless the harvest guideline is attained and the fishery closed before June 30. There will be a directed fishery of at least 9,500 mt, and 3,035 mt of the harvest guideline will be utilized for incidental landings following the closure of the directed fishery. After closure of the directed fishery, no more than 40% by weight of a landing of Pacific sardine, northern anchovy, jack mackerel, or market squid may consist of Pacific mackerel, except that up to 1 mt of Pacific mackerel may be landed without landing any other CPS. The fishery will be monitored, and if a sufficient amount of the harvest guideline remains before June 30, 2003, the directed fishery will be reopened. The goal is to achieve the harvest guideline and minimize the impact on other coastal pelagic fisheries. (67FR61994)

October 30, 2002. NMFS proposed a regulation to implement Amendment 10 to the CPS FMP, which was submitted by the Council for review and approval by the Secretary of Commerce. Amendment 10 addresses the two unrelated subjects of the transferability of limited entry permits and maximum sustainable yield for market squid. Only the provisions regarding limited entry permits require regulatory action. The purpose of this proposed rule is to establish the procedures by which limited entry permits can be transferred to other vessels and/or individuals so that the holders of the permits have maximum flexibility in their fishing operations while the goals of the FMP are achieved. (67FR66103)

November 25, 2002. NMFS proposed a regulation to implement the annual harvest guideline for Pacific sardine in the U.S. EEZ off the Pacific Coast for the fishing season January 1, 2003, through December 31, 2003. This harvest guideline has been calculated according to the CPS FMP and establishes allowable harvest levels for Pacific sardine off the Pacific Coast. Based on the estimated biomass of 999,871 mt and the formula in the FMP, a harvest guideline of 110,908 mt was determined for the fishery beginning January 1, 2003. The harvest guideline is allocated one-third for Subarea A, which is north of 35° 40' N latitude (Point Piedras Blancas) to the Canadian border, and two-thirds for Subarea B, which is south of 35° 40' N latitude to the Mexican border. The northern allocation is 36,969 mt; the southern allocation is 73,939 mt. (67FR70573)

December 31, 2002. NMFS issued a regulation to implement the annual harvest guideline for Pacific sardine in the U.S. EEZ off the Pacific Coast for the fishing season January 1, 2003, through December 31, 2003. This harvest guideline has been calculated according to the CPS FMP and establishes allowable harvest levels for Pacific sardine off the Pacific Coast. Based on the estimated biomass of 999,871 mt and the formula in the FMP, a harvest guideline of 110,908 mt was determined for the fishery beginning January 1, 2003. The harvest guideline is allocated one-third for Subarea A, which is north of 35° 40' N latitude (Point Piedras Blancas, California) to the Canadian border, and two-thirds for Subarea B, which is south of 35° 40' North latitude to the Mexican border. The northern allocation is 36,969 mt; the southern allocation is 73,939 mt. If an allocation or the harvest guideline is reached, up to 45% by weight of Pacific sardine may be landed in any landing of Pacific mackerel, jack mackerel, northern anchovy, or market squid. (67FR79889).

January 27, 2003. NMFS issued a regulation to implement Amendment 10 to the CPS FMP, which was submitted by the Council for review and approval by the Secretary of Commerce. Amendment 10 addresses the two unrelated subjects of the transferability of limited entry permits and maximum sustainable yield for market squid. Only the provisions regarding limited entry permits require regulatory action. The primary purpose of this final rule is to establish the procedures by which

limited entry permits can be transferred to other vessels and/or individuals so that the holders of the permits have maximum flexibility in their fishing operations while the goals of the FMP are achieved. (68FR3819)

June 26, 2003. NMFS proposed a regulatory amendment to the CPS FMP. This amendment was submitted by the Council for review and approval by the Secretary. The proposed amendment would change the management subareas and the allocation process for Pacific sardine. The purpose of this proposed amendment is to establish a more effective and efficient allocation process for Pacific sardine and increase the possibility of achieving OY. (68FR37995)

July 29, 2003. NMFS proposed a regulation to implement the annual harvest guideline for Pacific mackerel in the EEZ off the Pacific coast. The CPS FMP and its implementing regulations require NMFS to set an annual harvest guideline for Pacific mackerel based on the formula in the FMP. (68FR44518)

September 4, 2003. NMFS issued a final rule to implement a regulatory amendment to the CPS FMP that changed the management subareas and the allocation process for Pacific sardine. The purpose of this final rule was to establish a more effective and efficient allocation process for Pacific sardine and increase the possibility of achieving OY. (68FR52523)

September 9, 2003. NMFS announced the reallocation of the remaining Pacific sardine harvest guideline in the EEZ off the Pacific Coast. On September 1, 2003, 59,508 mt of the 110,908 mt harvest guideline is expected to remain unharvested. The CPS FMP requires that a review of the fishery be conducted and any uncaught portion of the harvest guideline remaining unharvested in Subarea A (north of Pt. Arena, California) and Subarea B (south of Pt. Arena, California) be added together and reallocated, with 20 percent allocated to Subarea A and 80 percent to Subarea B; therefore, 11,902 mt is allocated to Subarea A and 47,600 mt is allocated to Subarea B. The intended effect of this action is to ensure that a sufficient amount of the resource is available to all harvesters on the Pacific Coast and to achieve OY. (68FR53053)

October 3, 2003. NMFS issued a final rule to implement the annual harvest guideline for the July 1, 2003 - June 30, 2004 Pacific mackerel fishery in the EEZ off the Pacific coast. The CPS FMP and its implementing regulations require NMFS to set an annual harvest guideline for Pacific mackerel based on the formula in the FMP. Based on this approach, the biomass for July 1, 2003, is 68,924 mt. Applying the formula in the FMP results in a harvest guideline of 10,652 mt, which is lower than last year but similar to low harvest guidelines of recent years. (68FR57379)

October 28, 2003. NMFS announced the closure of the fishery for Pacific sardine in the EEZ off the Pacific Coast north of Pt. Arena, California (39° N latitude) at 12:01 a.m. local time on October 17, 2003. The purpose of this action is to comply with the allocation procedures mandated by the CPS FMP. (68FR61373)

December 3, 2003. NMFS proposed a regulation to implement the annual harvest guideline for Pacific sardine in the U.S. EEZ off the Pacific coast for the fishing season January 1, 2004, through December 31, 2004. This harvest guideline was calculated according to the regulations implementing the CPS FMP and established allowable harvest levels for Pacific sardine off the

Pacific coast. (68FR67638)

February 25, 2004. NMFS issued a regulation to implement the annual harvest guideline for Pacific sardine in the U.S. EEZ off the Pacific coast for the fishing season January 1, 2004, through December 31, 2004. This action adopts a harvest guideline and initial subarea allocations for Pacific sardine off the Pacific coast that have been calculated according to the regulations implementing the CPS FMP. Based on a biomass estimate of 1,090,587 mt (in U.S. and Mexican waters), using the FMP formula, the harvest guideline for Pacific sardine in U.S. waters for January 1, 2004, through December 31, 2004 is 122,747 mt. The biomass estimate is slightly higher than last year's estimate; however, the difference between this year's biomass is not statistically significant from the biomass estimates of recent years. Under the FMP, the harvest guideline is allocated one-third for Subarea A, which is north of 39° N latitude (Pt. Arena, California) to the Canadian border, and two-thirds for Subarea B, which is south of 39° N latitude to the Mexican border. Under this final rule, the northern allocation for 2004 would be 40,916 mt and the southern allocation would be 81,831 mt. (69FR8572)

Table 3. Coastal pelagic species limited entry permit vessel listing, with U.S. Coast Guard registered measurements and calculated gross tonnage (GT) values for each vessel. (2 Pages)

Vessel Name	CG Number	Year Built	Vessel Age	Registered Measurements (ft.) ¹			Calculated Vessel GT ²	Permit Specifications		
				Length	Breadth	Depth		Number	Endorsement	GT Allowance ³
Misty Moon	D578511	1976	28	49.60	19.00	10.10	63.8	1	63.8	70.2
Paloma	D280452	1960	44	47.40	16.50	8.30	43.5	2	43.5	47.9
St. George II	D238969	1939	65	71.40	21.20	9.70	98.4	3	98.4	108.2
Barbara H	D643518	1981	23	64.90	24.00	11.60	121.1	4	121.1	133.2
San Antonio	D236947	1937	67	72.10	19.50	8.70	82.0	5	82.0	90.2
<i>Permit No Longer Exists</i>	---	---	---	---	---	---	---	6	---	---
San Pedro Pride	D549506	1973	31	79.60	24.50	12.30	160.7	7	160.7	176.8
Ferrigno Boy	D602455	1978	26	69.60	23.70	12.60	139.3	8	139.3	153.2
King Philip	D1061827	1997	7	79.00	26.00	11.40	156.9	9	156.9	172.6
Sea Wave	D951443	1989	15	78.00	22.00	18.00	206.9	10	206.9	227.6
Mary Louise	D247128	1944	60	58.30	18.00	8.00	56.2	11	56.2	61.8
Bainbridge	D236505	1937	67	78.60	22.70	9.60	114.8	12	114.8	126.3
Pioneer	D246212	1944	60	77.80	24.30	11.20	141.9	13	141.9	156.1
Maria	D236760	1937	67	70.70	20.50	9.2	89.3	14	89.3	98.2
St. Joseph	D633570	1981	23	62.90	22.00	9.1	84.4	15	84.4	92.8
<i>Permit No Longer Exists</i>	---	---	---	---	---	---	---	16	---	---
Retriever	D582022	1977	27	54.20	19.6	8.70	61.9	17	61.9	68.1
Atlantis	D649333	1982	22	49.60	19.00	10.10	63.8	18	63.8	70.2
G. Nazzareno	D246518	1944	60	78.00	22.70	10.50	124.6	19	124.6	137.1
Sea Queen	D582167	1974	30	68.40	22.00	11.10	111.9	20	111.9	123.1
Pacific Leader	D643138	1981	23	59.50	21.00	9.20	77.0	21	77.0	84.7
Chovie Clipper	D524626	1970	34	51.10	18.00	10.30	63.5	22	63.5	69.9
Pacific Journey ⁴	OR 661 ZK	2001	3	64.30	22.01	10.3	97.7	23	97.7	107.5
Ocean Angel I	D584336	1977	27	49.60	19.00	10.1	63.8	24	63.8	70.2
Maria T	D509632	1967	37	57.30	18.10	9.8	68.1	25	68.1	74.9
Manana	D253321	1947	57	40.10	13.20	6.70	23.8	26	23.8	26.2
Miss Juli ⁵	---	---	---	---	---	---	---	27	55.5	61.1
Mineo Bros.	D939449	1989	15	58.00	21.00	9	73.4	28	73.4	80.7
Sea Queen	D583781	1977	27	49.00	16.00	8.00	42.0	29	42.0	46.2
Little Joe II	D531019	1971	33	50.10	16.00	7.60	40.8	30	40.8	44.9
Caitlin Ann	D960836	1990	14	98.00	33.00	15.70	340.2	31	340.2	374.2
Eldorado	D690849	1985	19	56.00	17.00	8.60	54.9	32	54.9	60.4
Kristen Gail	D618791	1980	24	87.00	26.00	12.80	194.0	33	194.0	213.4
Fiore D'Mare	D550564	1973	31	71.50	23.00	11.40	125.6	34	125.6	138.2
Endurance	D613302	1979	25	49.00	16.00	8.00	42.0	35	42.0	46.2
New Sunbeam	D284470	1961	43	50.30	20.00	4.00	27.0	36	27.0	29.7
Calogera A	D984694	1992	12	57.75	21.00	10.50	85.3	37	85.3	93.8
Eileen	D252749	1947	57	79.40	22.10	10.20	119.9	38	119.9	131.9
Pamela Rose	D693271	1985	19	54.00	19.00	9.00	61.9	39	61.9	68.1
New Stella	D598813	1978	26	58.00	22.00	8.40	71.8	40	71.8	79.0
Traveler	D661936	1983	21	56.00	17.00	6.90	44.0	41	44.0	48.4
Lucky Star	D295673	1964	40	49.90	17.00	7.30	41.5	42	41.5	45.7
Ocean Angel II	D622522	1980	24	74.50	28.00	10.70	149.5	43	149.5	164.5
Mello Boy	D1061917	1997	7	66.00	26.00	12.00	138.0	44	138.0	151.8
Trionfo	D625449	1980	24	63.80	19.30	9.60	79.2	45	79.2	87.1
Corva May ⁶	D615795	1979	25	49.60	19.00	10.10	63.8	46	85.0	93.5
Heavy Duty	D655523	1983	21	58.00	21.30	10.20	84.4	47	84.4	92.8
Aliotti Bros	D685870	1985	19	67.60	26.00	9.10	107.2	48	107.2	117.9
Lady J	D647528	1982	22	50.30	17.00	7.10	40.7	49	40.7	44.8
Anna S	D253402	1947	57	50.80	16.20	9.1	50.2	50	50.2	55.2
Endeavor	D971540	1990	14	57.40	19.00	9.9	72.3	51	72.3	79.5
Antoinette W	D606156	1978	26	45.40	16	7.6	37.0	52	37	40.7
Donna B	D648720	1982	22	73.20	25.00	12.9	158.2	53	158.2	174.0
Papa George	D549243	1973	31	72	22.8	11.5	126.5	54	126.5	139.2

Vessel Name	CG Number	Year Built	Vessel Age	Registered Measurements (ft.) ¹				Calculated Vessel GT ²	Permit Specifications		
				Length	Breadth	Depth	GT		Number	Endorsement	Transfer Allowance ³
Mercurio Bros	D650376	1982	22	42.00	16.70	8.60	40.4	55	40.4	44.4	
Kathy Jeanne	D507798	1967	37	65.90	22.20	8.80	86.3	56	86.3	94.9	
Merva W	D532023	1971	33	56.70	17.90	8.00	54.4	57	54.4	59.8	
Santa Maria	D236806	1937	67	79.20	19.50	8.80	91.1	58	91.1	100.2	
Buccaneer	D592177	1978	26	62.10	19.90	9.00	74.5	59	74.5	82.0	
Midnight Hour	D276920	1958	46	61.10	18.00	8.60	63.4	60	63.4	69.7	
Nancy B II	D542513	1972	32	56.40	18.00	8.80	59.9	61	59.9	65.9	
Miss Kristina	D580843	1977	27	50.00	16.00	7.40	39.7	62	39.7	43.7	
Emerald Sea	D626289	1980	24	62.70	26.00	7.90	86.3	63	86.3	94.9	
Connie Marie	D624240	1980	24	49.90	17.90	9.10	54.5	64	54.5	60.0	
Theresa Marie	D629721	1980	24	40.60	14.70	6.60	26.4	65	26.4	29.0	

¹ Vessel dimension information was obtained from the Coast Guard Website at: <http://psix.uscg.mil/>

² Vessel Gross Tonnage $GT=0.67(\text{Length}*\text{Breadth}*\text{Depth})/100$. See 46 CFR 69.209.

³ Maximum transfer allowance is based on permit GT + 10%.

⁴ Pacific Journey was built in Canada and is not currently registered with the U.S. Coast Guard. Measurements by marine surveyor Det Norske Veritas.

⁵ Miss Juli sank in 2001 and is pending replacement.

⁶ Permit #46 was transferred to Corva May after the Jenny Lynn sank in 2003.

Table 4. Vessel age and calculated GT for the initial and current limited entry fleet.

	Initial Fleet	Current Fleet
Number of Vessels	65	62
Average Vessel Age	35 yrs	32 yrs
Range of Ages	12 - 66 yrs	3 - 67 yrs
Average GT	71.3	88.1
Range of GT	12.8 - 206.9	23.8 - 340.2
Sum of Fleet GT	4635.9	5462.9
Capacity Goal (GT) ¹	—	5650.9
Transferability Trigger	—	5933.5

¹ Established in Amendment 10 to the CPS FMP.

Table 5. Number of comm. landings sampled by CDFG port sampling program, 1985-2003.

Year	Sardine Landings	Mackerel Landings	Total Landings
2003	151	74	225
2002	137	94	231
2001	172	89	261
2000	110	85	195
1999	157	70	227
1998	97	97	194
1997	113	116	229
1996	96	85	181
1995	254	215	469
1994	119	167	286
1993	85	183	268
1992	231	113	344
1991	169	42	211
1990	99	233	332
1989	149	451	600
1988	190	385	575
1987	128	510	638
1986	105	440	545
1985	40	333	373

Table 6. Incidental catch from landings sampled by the CDFG port sampling program, 1992-1999. (Information represents occurrence of incidental catch, not numbers or weights of fish.)

Yr	Anchovy	Jacksmelt	Herring	White		Pac			Jack	Y-fin	Skipjack	Total
				Croaker	M. Squid	Lingcod	Mack	Y-tail	Mackerel	Tuna	Tuna	
99	5	1	1									7
98	3		2	1	4							10
97	1		1		44							46
96	8			1	22	1						32
95	5		1		71		1	1	1			80
94			1									1
93												--
92					1					1	1	3

Table 7a. Incidental catch recorded by CDFG samplers in Los Angeles County, California, 2001.

Fishes	Incidents	Elasmobranchs	Incidents	Invertebrates,	Incidents
Halibut	8	P. electric ray	2	Kelp	50
Bonito	1	“Sand shark”	1	Crab	7
Sablefish	3	Spiny dogfish	1	Sea cucumber	2
Cusk eel	4	Smoothhound	1	“Debris”	1
Kelp bass	1	“Shark”	1	Kelp fronds	1
Sand bass	2	Sevengill shark	1	Lobster	3
Flyingfish	1	Bat ray	22	Plastic bottle	1
Lizardfish	6	“Skates”	4	Sea star	2
Tonguefish	3	Thornback	4	“Sea weed”	4
Sardine	13	Horn shark	4	Snail	1
“Flatfish”	33	Swell shark	1	Squid	16
Butterfish	5	Stingray	2	Squid eggs	1
Pompano	1				
Barracuda	5				
Midshipman	13				
Senorita	1				
“Bass”	1				
Anchovy	10				
Jacksmelt	4				
White croaker	19				
Pacific mackerel	21				
Jack mackerel	29				
California	26				
Total	210	Total	44	Total	89

Table 7b. Incidental catch recorded by CDFG samplers in Los Angeles County, California, 2002.

Fishes	Incidents	Elasmobranchs	Incidents	Invertebrates, Vegetation and Garbage	Incidents
Anchovy, northern	13	Guitarfish, shovelnose	1	Crab, pelagic red	6
Barracuda, California	2	Ray, bat	20	Crab, shells	1
Bass, barred sand	5	Ray, CA butterfly	1	Crab, unsp. Rock	3
Bass, kelp	2	Ray, Pacific electric	3	Cucumber, sea	3
Bonito, Pacific	1	Ray, round stingray	1	Eelgrass	3
Butterfish	11	Shark, brown smoothhound	1	Gorgonians	1
Corbina, California	5	Shark, gray smoothhound	1	Jellyfish	1
Croaker, white	24	Shark, Pacific angel	1	Kelp	67
Croaker, yellowfin	1	Shark, unspecified	1	Lobster, California spiny	3
Cusk-eel	9	Skate, thornback	5	Octopus, unspecified	3
Eel, Yellow Snake	1	Skate, unspecified	2	Pleurobranch	1
Flatfish, unspecified	29			Prawn, spot	1
Flyingfish	2			Salps	19
Halibut, California	6			Sea stars	2
Herring, round	1			Squid egg cases	1
Jacksmelt	3			Squid, market	35
Lizardfish, California	9				
Midshipman, plainfin	13				
Sanddab	1				
Scorpionfish, California	26				
Seabass, giant (black)	1				
Senorita	1				
Sole, bigmouth	1				
Sole, fantail	1				
Surfperch, pink	2				
Surfperch, unspecified	1				
Tonguefish	3				
Topsmelt	1				
Turbot, curlfin	1				
Turbot, diamond	1				
Turbot, hornyhead	3				
Whitefish, ocean	1				
Total incidents	181	Total incidents	37	Total incidents	150

Table 7c. Incidental catch recorded by CDFG samplers in Los Angeles County, California, 2003.

Fishes	Incidents	Elasmobranchs	Incidents	Invertebrates, Vegetation and Garbage	Incidents
Anchovy, northern	15	Guitarfish,	9	Crab, shells	1
Barracuda, California	0	Ray, bat	34	Crab, unsp. Rock	3
Bass, barred sand	5	Ray, round stingray	5	Cucumber, sea	4
Bass, kelp	5	Skate, thornback	13	Eelgrass	4
Bonito, Pacific	0			Jellyfish	2
Butterfish	10			Crab, shells	1
Corbina, California	0			Crab, elbow	1
Croaker, white	27				
Combfish, longspine	1				
Cusk-eel	5				
Eel, Yellow Snake	1				
Flatfish, unspecified	10				
Flyingfish	2				
Halibut, California	26				
Herring, round	0				
Jacksmelt	1				
Lizardfish, California	4				
Midshipman, plainfin	16				
Midshipman,	2				
Sanddab	8				
Scorpionfish,					
California	36				
Tonguefish	4				
Turbot, curlfin	1				
Turbot, diamond	1				
Turbot, hornyhead	16				
Total incidents	196		61		16

Table 7d. Incidental catch recorded by CDFG port samplers in Monterey, California, 2003.

Finfish	Incidents	Elasmobranchs	Incidents	Invertebrates and Vegetation	Incidents
Mackerel, Pacific	8	Shark, shortfin mako	2	Squid	3
Jack mackerel	2	Bat Ray	2	Sea Star	3
Butterfish	3	Ray, Pacific electric	2	Crab, Dungeness	5
Anchovy, northern	2	Skate, unspecified	2	Rock Crab, unsp.	1
Herring, Pacific	2	Skate, Big	2	Kelp	2
Jacksmelt	4	Skate, California	1	Jellyfish	3
Smelt, whitebait	3	Thornback Skate	4	Squid Egg Cases	1
		Shark, gray			
Sole, unsp	1	smoothhound	1	Crab, slender	2
Sole, Sand	10			Crab, Decorator	1
CA Halibut	6				
Sanddab	6				
Sanddab, Pacific	1				
Flounder, starry	2				
Turbot	2				
CA Scorpionfish	1				
Sculpin, staghorn	2				
Shad, American	1				
White Croaker	9				
Eel, wolf	1				
Sturgeon, unsp.	1				
Surfperch, unsp.	2				
Total Incidents	69		16		21

Table 8a. Market squid incidental catch for 2002. Incidental catch includes species landed with market squid and recorded on landing receipts (round haul gear).

Species name	Number of Landings	Tons
Pacific sardine	107	1601.6
Northern anchovy	16	342.6
Pacific mackerel	15	71.2
Jack Mackerel	15	16.5

Table 8b. Market squid incidental catch for 2003. Incidental catch includes species landed with market squid and recorded on landing receipts (round haul gear).

Species name	Number of Landings	Tons
Pacific sardine	109	1447.9
Northern anchovy	8	91.9
Pacific mackerel	16	163.2
Jack Mackerel	14	33.6
Jacksmelt	1	1.9
Surfperch	1	0.1

Table 8c. 2002 - Percent frequency of bycatch in observed loads of California market squid.

Common Name	Total All Ports	Monterey/ Moss Landing	Santa Barbara/San Pedro/ Ventura	Terminal Island
Algae, marine	0.2			0.7
Anchovy, northern	4.8	3.8	0	5.9
Barnacle	0.2	0		0.7
Butterfish (Pacific pompano)	4.1	5.1	0	3.9
Cabezon	0.4	0.6		0.7
Crab, Dungeness	2.2	6.4		0
Crab, pelagic red	0.2	0		0.7
Crab, rock unspecified	0.4	0		1.3
Croaker, white	0.7	0		2
Fish, unspecified	0.9	0		2.6
Guitarfish, shovelnose	0.2	0		0.7
Herring, Pacific	0.4	1.3		0
Invertebrates, colonial	15.2	44.2		0.7
Jacksmelt	2.6	7.7		0
Kelp	15.2	14.1	0.1	20.3
Mackerel, jack	5.2	6.4	0	5.9
Mackerel, Pacific	8.9	1.3	0.1	13.1
Midshipman, plainfin	0.2	0		0.7
Mussel	0.2	0		0.7
Ray, bat	1.5	1.9	0	2
Ray, Pacific electric	1.7	5.1		0
Ray, unspecified	0.2	0.6		0
Rockfish, bocaccio	0.4	1.3		0
Rockfish, unspecified	0.2	0.6		0
Salmon, chinook	1.3	3.8		0
Sanddab	2.2	0.6	0.1	0.7
Sanddab, Pacific	0.2	0.6		0
Sardine, Pacific	26	12.2	0.3	32.7
Saury, Pacific	0.4	1.3		0
Sea Anemone	0.2	0.6		0
Scorpionfish, California	0.9	0		2.6
Sea stars	0.9	0	0	2
Shark, horn	0.4	0	0	0.7
Sole, bigmouth	0.2	0		0.7
Sole, English	0.2	0.6		0
Sole, unspecified	0.4	0	0	0.7
Squid, mrkt (egg capsules)	8	18.6	0	3.3
Stingray, round	0.2	0	0	0
Stingray, unspecified	0.2	0		0.7
Surfperch, pink	0.2	0		0.7
Surfperch, unspecified	0.2	0.6		0
Triggerfish	0.2	0		0.7
Turbot, curlfin	0.2	0		0.7
Turbot, diamond	0.2	0		0.7
Turbot, hornyhead	0.2	0		0.7
Turbot, unspecified	0.2	0.6		0.7
Total number of samples	394	85	117	192

Table 8d. 2003 - Percent freq. of bycatch in observed loads of CA market squid. (2 pages)

Common Name	Total All Ports	Monterey/ Moss Landing	Santa Barbara/ San Pedro/ Ventura	Terminal Island
Anchovy, northern	8.1	8.2	6	9.4
Barracuda, California	0.3			0.5
Bass, barred sand	0.3			0.5
Blacksmith	0.5			1
Bonito, Pacific	0.3			0.5
Butterfish (Pacific pompano)	5.3	10.6	4.3	3.6
Cabezon	0.3			0.5
Crab, Dungeness	2.8	12.9		
Crab (purple globe)	0.5			1
Crab (sheep)	0.8			1.6
Crab Shells	0.8			1.6
Crab, box	0.3			0.5
Crab, rock unspecified	0.5			1
Croaker, white	0.5			1
Decorator crab	0.3			0.5
Eel Grass	1.5			3.1
Flyingfish	0.8			1.6
greenling,painted	0.3			0.5
Halibut, California	1.5	2.4		2.1
Hermit crab	0.3			0.5
Herring, Pacific	0.5	2.4		
Herring, round	0.3			0.5
Invertebrates, colonial	3.6	14.1		1
Jacksmelt	4.8	18.8		1.6
Jellyfish	8.1	35.3		1
Kelp	23.4	10.6	14.5	34.4
Kelp Surfperch	0.3			0.5
Lizardfish, California	0.5			1
Mackerel, jack	19	24.7	4.3	25.5
Mackerel, Pacific	18.5	9.4	16.2	24
Medusa fish	0.3	1.2		
Midshipman, plainfin	1.3	2.4		1.6
Octopus, unspecified	0.8			1.6
Poacher, unsp.	0.3			0.5
Queenfish	0.5			1
Ray, bat	2.5	3.5	0.9	3.1
Ray, Pacific electric	3.3	15.3		
Ray, unspecified	0.3			0.5
Rockfish, blue	0.3	1.2		
Rockfish, bocaccio	1.3	2.4		1.6
Rockfish, olive	0.3			0.5
Rockfish, shortbelly	0.3	1.2		
Rockfish, unspecified	0.5	1.2		0.5
Salema	0.8	3.5		
Salmon	0.3	1.2		
Salmon, chinook	0.3	1.2		
Salps	0.3			0.5
Sanddab	7.9	7.1	6.8	8.9
Sanddab, longfin	0.8			1.6

Common Name	Total All Ports	Monterey/ Moss Landing	Santa Barbara/ San Pedro/ Ventura	Terminal Island
Sanddab, Pacific	2.3	2.4		3.6
Sanddab, speckled	0.5	1.2		0.5
Sardine, Pacific	42.1	30.6	43.6	46.4
Saury, Pacific	1	3.5		0.5
Scorpionfish, California	3.3			6.8
Sculpin (unidentified)	0.8	3.5		
Sea cucumber, unspecified	1.5			3.1
Sea stars	2	3.5	0.9	2.1
Shark, horn	0.8		0.9	1
Shark, Pacific angel	0.3			0.5
Skate, big	0.3	1.2		
Skate, thornback	0.5			1
Smelt, night	0.3	1.2		
Smelt (unidentified)	0.3			0.5
Smelts, true	0.3			0.5
Sole, unspecified	0.3		0.9	
Sole (curlfin)	0.3			0.5
Sole, bigmouth	0.3			0.5
Sole, English	0.8	2.4		0.5
Sole, fantail	0.5			1
Sole, sand	0.5	2.4		
Squid, jumbo	0.3			0.5
Squid, market (egg capsules)	10.9	17.6	2.6	13
Sunfish, ocean	0.3	1.2		
Stingray	0.8		0.9	1
Surfperch, pink	0.3			0.5
Surfperch, unspecified	0.5	1.2		0.5
Thornyheads	0.3			0.5
Tunicates	0.5			1
Turbot, curlfin	0.8	2.4		0.5
Turbot, unspecified	2	9.4		
Turbot, diamond	0.3			0.5
Turbot, hornyhead	1			2.1
Urchin, purple sea	0.8			1.6
Total number of samples	394	85	117	192

Table 9. Expanded salmonid bycatch in *P. sardine* fisheries in OR and WA, 2000- 2003.

	Chinook (live)	Chinook (dead)	Coho (live)	Coho (dead)	Pink (live)	Unid Sal (live)	Unid Sal (dead)	Total (live)	Total (dead)	Grand Total
2003										
Oregon								315	185	500
Washington	92	262	81	231	0	32	119	205	612	817
2002										
Oregon								199	81	280
Washington	150	356	61	765	0	200	0	411	1121	1532
2001										
Oregon	45	45	201	134	22	45	0	313	179	492
Washington	449	170	571	504	0	80	0	1100	674	1774
2000										
Oregon	43	72	159	43	0	303	43	505	158	663
Washington	38	3	276	116	0	7	0	321	119	440

Table 10. Observed and reported catches of non-target species caught in the Pacific sardine fishery off of Oregon, 2003. Oregon did not employ at-sea observers during the 2003 fishery.

Species	Logbook Data	Observer Data
	# Caught	# Caught
Blue shark	1	
Thresher shark	5	
Dogfish shark	75 lb	
Unknown shark	3	
Salmon (unknown)	460	4
	(63% alive; 37% dead)	(75% alive; 25% dead)
Mackerel	225,007 lb	750 lb
Anchovy	500 lb	

Table 11. Observed and expanded total number of salmon caught in the Pacific sardine fishery off of Oregon, 2000 - 2003. (Expanded total is based on salmon per trip).

Year	Chinook		Coho		Pink	Unknown		Total		Grand Total
	alive	dead	alive	dead	alive	alive	dead	alive	dead	
2003– exp total								315	185	500
2002 – exp total								199	81	280
2001 – exp total	45	45	201	134	22	45	0	313	179	492
2000 – exp total	43	72	159	43	0	303	43	504	159	663

Table 12a. Expanded observed bycatch data for the 2000 - 2003 Washington trial sardine fisheries. Expanded data based upon salmon and shark per mt sardines landed.

Year	Chinook (live)	Chinook (dead)	Coho (live)	Coho (dead)	Unkn. Salmon (live)	Shark (live)	Shark (dead)
2003	92	262	81	231	151	43	23
2002	150	356	61	765	200	37	22
2001	449	170	571	504	80	150	50
2000	38	3	276	116	7	169	31

Table 12b. List of the observed and reported logbook catches of non-targeted species caught in the 2003 Washington sardine fishery (non-expanded numbers of individuals, unless otherwise noted).

Species	Observer Data		Logbook Data	
	# Released Alive	# Dead	# Released Alive	# Dead
Anchovy	0	210 lbs	0	0
Blue Shark	18	5	0	0
Chinook salmon	24	68	78	83
Coho salmon	21	60	54	60
Dogfish	44	279	30	83
Dungeness crab	5	5	0	0
Hake	3	545	0	0
Herring	1	52 mt	0	0
Jack Mackerel	59	4 mt	0	0
Pacific Mackerel	500	47 mt	0	0
Pink salmon	0	1	0	0
Salmon species	16	31	0	0
Sanddab	0	1	0	0
Shad	0	1	0	0
Soupin shark	2	2	0	0
Thresher shark	1	1	0	0

Table 13. Species noted as encountered on CDFG Live Bait Logs, 1996-2003.

Year	Days Fished	Grunion	Smelts	Barracuda	Herring	Stickle-back	Shiner Surfperch	Sea Star	Queenfish
2003	1151			32					
2002	1073			1					1
2001	1052	1		56					
2000	488	1		34					
1999	449		1	7	1				
1998	809			69	1		1		
1997	773			104			3	1	
1996	522		5	27	3	1			

Table 14. Estimates of Pacific sardine and Northern anchovy live bait harvest in California (mt). Data for 1939-1992 from Thomson et al. (1994), and 1993-2003 from CDFG logs.

Year	Anchovy	Sardine	Year	Anchovy	Sardine
1939	1,364	0	1972	5,307	0
1940	1,820	0	1973	5,639	0
1941	1,435	0	1974	5,126	0
1942	234	0	1975	5,577	0
1943	World War II	World War II	1976	6,202	0
1944	World War II	World War II	1977	6,410	0
1945	World War II	World War II	1978	6,013	107
1946	2,493	0	1979	5,364	0
1947	2,589	0	1980	4,921	12
1948	3,379	0	1981	4,698	6
1949	2,542	0	1982	6,978	38
1950	3,469	0	1983	4,187	193
1951	4,665	0	1984	4,397	53
1952	6,178	0	1985	3,775	11
1953	5,798	0	1986	3,956	17
1954	6,066	0	1987	3,572	216
1955	5,557	0	1988	4,189	50
1956	5,744	0	1989	4,594	100
1957	3,729	0	1990	4,842	543
1958	3,843	0	1991	5,039	272
1959	4,297	0	1992	2,572	1,807
1960	4,225	0	1993	669	176
1961	5,364	0	1994	2,076	1,506
1962	5,595	0	1995	1,278	2,055
1963	4,030	0	1996	703	1,801
1964	4,709	0	1997	1,077	2,344
1965	5,645	0	1998	304	2,037
1966	6,144	0	1999	453	2411
1967	4,898	0	2000	834	1270
1968	6,644	0	2001	1,238	1245
1969	4,891	0	2002	965	1701
1970	5,543	0	2003	1,085	3028
1971	5,794	0			

Table 15. Ratio of anchovy to sardine in reported live bait catch in California, 1994-2003.

Year	Anchovy	Sardine	Total	% Anchovy	% Sardine
2003	1,085	3,028	4,113	0.26	0.74
2002	965	1,701	2,666	0.36	0.64
2001	1,238	1,245	2,483	0.5	0.5
2000	834	1,270	2,104	0.4	0.6
1999	453	2,411	2,864	0.16	0.84
1998	304	2,037	2,341	0.13	0.87
1997	1,077	2,344	3,420	0.31	0.69
1996	703	1,801	2,504	0.28	0.72
1995	1,278	2,055	3,333	0.38	0.62
1994	2,076	1,506	3,582	0.58	0.42

Table 16. Commercial harvest (mt) of CPS finfish in Ensenada, Baja California, Mexico, 1978-2003^{1/}. 2003 landings do not include December. Market squid are not commercially fished off Ensenada.

Year	Sardine	Anchovy	Pacific mackerel	Jack mackerel
1978	0	135,036	0	n/a
1979	0	192,476	0	n/a
1980	0	242,907	0	n/a
1981	0	258,745	0	n/a
1982	0	174,634	0	n/a
1983	274	87,429	135	n/a
1984	0	102,931	128	n/a
1985	3,722	117,192	2,582	n/a
1986	243	93,547	4,883	n/a
1987	2,432	124,482	2,082	n/a
1988	2,035	79,495	4,484	902
1989	6,224	81,811	13,687	0
1990	11,375	99	35,767	25
1991	31,392	831	17,500	30
1992	34,568	2,324	24,345	n/a
1993	32,045	284	7,741	n/a
1994	20,877	875	13,319	85
1995	35,396	17,772	4,821	0
1996	39,065	4,168	5,604	47
1997	68,439	1,823	12,477	78
1998	47,812	972	50,726	480
1999	58,569	3,482	10,168	781
2000	51,173	1,562	7,182	0
2001	22,246	76	4,078	0
2002	43,436	0	7,962	0
2003	30,537	1,287	2,678	0

1/ Source: Data provided by Dr. Celia Eva-Cotero, CRIP Instituto Nacional de la Pesca, Ensenada.

Table 17. Pacific sardine time series of stock biomass (age-1 fish in mt) and recruitment (age-0 fish in 1,000s) estimated at the beginning of semester 2 of each year, 1983-2003. Stock biomass estimates are presented for Area 1 (Inside) and the Total Area of the stock. The 95% confidence intervals (CI) for Total Area biomass and recruitment estimates are also presented. See Conser *et al.* (2003) for details regarding methods used to derive estimates.

Year	Stock Biomass				Recruitment		
	Area 1	Total Area	Lower CI	Upper CI	Total Area	Lower CI	Upper CI
1983	4,721	4,721	2,716	9,937	146,767	89,767	274,267
1984	12,848	12,909	8,917	22,888	222,886	140,886	392,886
1985	21,212	21,703	15,534	35,991	214,411	145,411	368,911
1986	29,752	31,372	23,751	49,516	859,821	606,321	1,355,821
1987	73,047	76,635	59,716	114,284	842,804	602,804	1,257,804
1988	106,233	115,909	94,590	160,815	1,476,516	1,026,516	2,326,516
1989	162,390	181,563	149,812	252,778	1,173,843	809,343	1,973,843
1990	177,666	211,270	173,169	296,546	4,872,561	3,227,561	8,432,561
1991	228,789	266,211	202,708	414,083	5,924,857	3,754,857	10,474,857
1992	356,801	425,957	325,258	657,290	4,064,304	2,594,304	7,459,304
1993	334,681	447,278	350,663	684,962	9,205,937	6,225,937	15,365,937
1994	491,775	652,113	532,364	955,568	10,277,379	7,227,379	16,477,379
1995	504,856	722,777	586,245	1,026,232	6,512,311	4,652,311	10,662,311
1996	525,105	783,985	659,246	1,081,543	5,664,403	4,164,403	8,899,403
1997	479,680	766,702	657,839	1,025,251	10,089,643	7,324,643	15,619,643
1998	479,942	802,487	678,202	1,075,551	12,123,733	8,853,733	18,523,733
1999	553,811	919,974	782,081	1,233,861	8,634,180	6,134,180	14,014,180
2000	554,554	945,892	798,927	1,275,202	8,578,695	5,338,695	15,448,695
2001	474,799	864,672	708,635	1,227,548	14,792,684	8,887,684	27,542,684
2002	604,893	1,034,764	785,740	1,618,994	9,275,313	4,690,313	20,365,313
2003	633,102	1,090,587	777,606	1,810,895	12,586,415	5,036,415	36,886,415

Table 18. Annual U.S. West Coast Pacific sardine landings and harvest guidelines (mt) by state and management subarea, 1981-2004. As of 2003, the “Southern Subarea” comprises fisheries and landings from Pt. Arena (39° N latitude) to the Mexican border.

Year	So. Calif.	No. Calif.	Calif. Total	Oregon	Washington	Management Area Landings			Harvest Guidelines		
						Southern Subarea	Northern Subarea	WOC Total	Southern Subarea	Northern Subarea	Total HG
1981	34.4	0.0	34.4	0.0	0.0	34.4	0.0	34.4	n/a	n/a	n/a
1982	1.8	0.0	1.8	0.0	0.0	1.8	0.0	1.8	n/a	n/a	n/a
1983	0.6	0.0	0.6	0.0	0.0	0.6	0.0	0.6	n/a	n/a	n/a
1984	0.9	0.3	1.2	0.0	0.0	0.9	0.3	1.2	n/a	n/a	n/a
1985	3.7	2.2	5.8	0.0	0.0	3.7	2.2	5.8	n/a	n/a	n/a
1986	304.0	84.4	388.5	0.0	0.0	304.0	84.4	388.5	n/a	n/a	n/a
1987	391.6	47.8	439.4	0.0	0.0	391.6	47.8	439.4	n/a	n/a	n/a
1988	1,185.4	3.0	1,188.4	0.0	0.0	1,185.4	3.0	1,188.4	n/a	n/a	n/a
1989	598.7	238.0	836.7	0.0	0.0	598.7	238.0	836.7	n/a	n/a	n/a
1990	1,537.1	127.1	1,664.2	0.0	0.0	1,537.1	127.1	1,664.2	n/a	n/a	n/a
1991	6,601.4	985.9	7,587.3	0.0	0.0	6,601.4	985.9	7,587.3	n/a	n/a	n/a
1992	14,821.9	3,127.6	17,949.5	0.0	0.0	14,821.9	3,127.6	17,949.5	n/a	n/a	n/a
1993	14,669.6	675.6	15,345.2	0.2	0.0	14,669.6	675.8	15,345.4	n/a	n/a	n/a
1994	9,348.5	2,295.0	11,643.5	0.0	0.0	9,348.5	2,295.0	11,643.5	n/a	n/a	n/a
1995	34,645.7	5,681.2	40,326.9	0.0	0.0	34,645.7	5,681.2	40,326.9	n/a	n/a	n/a
1996	24,565.0	7,988.1	32,553.1	0.0	0.0	24,565.0	7,988.1	32,553.1	n/a	n/a	n/a
1997	29,885.4	13,359.7	43,245.1	0.0	0.0	29,885.4	13,359.7	43,245.1	n/a	n/a	n/a
1998	32,462.1	10,493.3	42,955.4	1.0	0.0	32,462.1	10,494.3	42,956.4	n/a	n/a	n/a
1999	42,017.2	17,246.3	59,263.5	775.5	0.0	42,017.2	18,021.8	60,039.0	n/a	n/a	n/a
2000	42,296.9	11,367.4	53,664.2	9,527.9	0.0	42,296.9	25,686.7	67,983.6	124,527.3	62,263.7	186,791.0
2001	44,708.9	7,102.5	51,811.4	12,780.3	11,127.1	44,708.9	31,009.9	75,718.8	89,824.7	44,912.3	134,737.0
2002	49,366.7	14,078.1	63,444.8	23,125.8	15,832.4	49,366.7	53,036.3	102,403.0	78,961.3	39,480.7	118,442.0
2003	30,289.6	7,427.3	37,716.9	25,257.6	11,920.1	37,716.9	37,177.7	74,894.6	73,938.7	36,969.3	110,908.0
2004	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	81,831.3	40,915.7	122,747.0

Table 19. West Coast Pacific sardine landings by country. Mexican landings are for Ensenada, Baja California, 1981-2003.

Year	Mexico	United States	Canada	Total
1981	0.0	34.4	0.0	34.4
1982	0.0	1.8	0.0	1.8
1983	273.6	0.6	0.0	274.2
1984	0.2	1.2	0.0	1.4
1985	3,722.3	5.9	0.0	3,728.2
1986	242.6	388.5	0.0	631.1
1987	2,431.6	439.4	0.0	2,871.0
1988	2,034.9	1,188.4	0.0	3,223.3
1989	6,224.2	836.7	0.0	7,060.9
1990	11,375.3	1,664.2	0.0	13,039.5
1991	31,391.8	7,587.3	0.0	38,979.1
1992	34,568.2	17,949.5	0.0	52,517.7
1993	32,045.0	15,345.4	0.0	47,390.4
1994	20,876.9	11,643.5	0.0	32,520.4
1995	35,396.2	40,326.9	25.0	75,748.1
1996	39,064.7	32,553.1	88.0	71,705.8
1997	68,439.1	43,245.1	34.0	111,718.2
1998	47,812.2	42,965.4	745.0	91,513.6
1999	58,569.4	60,039.0	1,250.0	119,858.4
2000	51,172.9	67,983.6	1,718.0	120,874.5
2001	22,246.0	75,718.8	1,600.0	99,564.8
2002	43,436.4	102,403.0	703.0	146,542.4
2003	30,537.0	74,894.6	954.0	106,385.6

Table 20. RecFIN estimated recreational harvest of Pacific (chub) mackerel in California by fishing mode (metric tons), 1980-2003.

Year	Man Made			Party/Charter	Private/Rental	Calif Total
	Structures	Beach/Bank	Shore Modes			
1980	349.9	74.9	-	1,320.5	1,009.2	2,754.4
1981	224.6	63.4	-	590.7	515.7	1,394.5
1982	271.5	3.2	-	865.1	527.6	1,667.5
1983	358.5	3.4	-	702.6	404.3	1,468.9
1984	257.9	24.0	-	577.9	585.5	1,445.4
1985	141.4	0.6	-	544.7	389.9	1,076.6
1986	-	-	91.6	520.1	390.9	1,002.6
1987	-	-	450.8	244.6	575.8	1,271.2
1988	-	-	105.5	239.1	455.4	800.1
1989	-	-	256.7	134.8	219.1	610.6
1993	88.3	0.5	-	172.2	362.1	623.0
1994	200.9	5.0	-	245.1	496.3	947.3
1995	119.4	1.8	-	373.4	531.8	1,026.3
1996	92.5	0.9	-	319.4	281.1	693.9
1997	145.0	3.3	-	169.0	650.5	967.8
1998	96.4	0.4	-	131.3	221.4	449.4
1999	57.3	5.1	-	60.7	73.3	196.4
2000	34.4	16.9	-	76.9	121.9	250.1
2001	138.3	208.8	-	52.2	162.2	561.4
2002	72.0	20.0	-	26.0	161.0	279.0
2003	177.0	31.0	-	25.0	108.0	341.0

Notes from RecFIN query:

1. No data in from 1990 to 1992.
2. No data in wave 1 1995.
3. Data in 2003 are preliminary and may be incomplete.
4. Northern California charter boats were not fully sampled due to refusals.
5. Northern California charter boat tuna trips were not fully sampled.
6. Year 2002 California Party Charter (PC) estimates from PC Phone Survey.

Table 21. RecFIN estimated recreational harvest of Pacific (chub) mackerel by subarea (metric tons), 1980-2003.

Year	Southern California	Northern California	Oregon	Washington	Total
1980	2,745.3	9.1	-	-	2,754.4
1981	1,225.6	168.8	-	-	1,394.5
1982	1,554.7	112.8	-	-	1,667.5
1983	1,341.3	126.0	1.5	-	1,468.9
1984	1,257.4	187.7	0.2	-	1,445.4
1985	1,028.0	48.6	0.0	-	1,076.6
1986	968.2	34.3	-	-	1,002.6
1987	1,257.7	13.5	-	-	1,271.2
1988	778.9	21.2	-	-	800.1
1989	605.6	5.0	-	-	610.6
1990	N/A	N/A	N/A	N/A	N/A
1991	N/A	N/A	N/A	N/A	N/A
1992	N/A	N/A	N/A	N/A	N/A
1993	591.0	30.9	1.1	-	623.0
1994	933.4	13.8	0.2	-	947.3
1995	1,022.9	3.4	0.0	-	1,026.3
1996	664.0	29.8	0.1	-	693.9
1997	568.6	398.4	0.8	-	967.8
1998	425.6	22.6	0.1	1.0	449.4
1999	193.0	3.0	-	0.3	196.4
2000	248.6	1.4	0.1	-	250.1
2001	557.5	3.9	-	-	561.4
2002	279.0	0.0	-	-	279.0
2003	340.0	1.0	0.0	-	341.0

Notes from RecFIN query:

1. No data in from 1990 to 1992.
2. No data in wave 1 1995.
3. Data in 2003 are preliminary and may be incomplete.
4. Northern California charter boats were not fully sampled due to refusals.