

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).
- At the November 2003 Council meeting, the Council adopted a harvest guideline of 122,747 mt for the 2004 Pacific sardine fishery, within an incidental catch allowance of up to 45%. This harvest guideline is based on a biomass estimate of 1,090,587 mt. Per the revised allocation framework, on January 1, the harvest guideline will be allocated 33% to the northern subarea and 66% to the southern subarea, with a subarea dividing line at Point Arena, CA. . The final rule implementing the harvest guideline was published December 3, 2003 (68FR67638).
- At the June 2004 Council meeting, the Council adopted the following management measures for the July 2004-June 2005 Pacific mackerel fishery: 1) Total fishery harvest guideline of 13,268 mt; 2) Directed fishery guideline of 9,100 mt; and 3) Set-aside for incidental catches of 4,168 mt and an incidental catch rate limit of 40% when mackerel are landed with other CPS species, except that up to one mt of Pacific mackerel can be landed without landing any other CPS. The Council also requested NMFS track utilization of the directed fishery guideline and advise the Council at the March 2005 meeting if additional action (e.g. a mop-up fishery) is warranted. Additionally, the Council initiated an amendment to the CPS FMP with the primary purpose of allocating the coastwide Pacific sardine harvest guideline. The Council discussed a schedule that included final Council action on the FMP amendment by June 2005, which would enable implementation by January 2006. To facilitate development of the amendment, the Council directed the CPSAS to draft a range of alternative sardine allocation scenarios. The Council also directed the CPS Management Team to formally review the CPS FMP issues raised by NMFS to identify issues that could be addressed through amendment to the CPS FMP and if they could be addressed in the short-term or would require more extensive time to complete.
- At the September 2004 Council meeting, the Council adopted STAR Panel reports for Pacific mackerel and Pacific sardine. New assessment methodologies will be used for management of the 2005 sardine fishery and the 2005-2006 Pacific mackerel fishery. Relative to the CPS FMP amendment process, the Council requested the CPSAS to narrow the current broad range of Pacific Sardine allocation alternatives for Council consideration at the November 2004 meeting and Secondly, received information from the CPSMT about their consideration of several FMP-related issues raised by NMFS, and directed Council staff to communicate to NMFS the Council plans for further review of CPS EFH.
- At the November 2004 Council meeting, the Council adopted a harvest guideline of 136,179 mt for the 2005 Pacific sardine fishery. This harvest guideline is based on a biomass estimate of 1.2 million mt. Per the FMP allocation framework, on January 1 the harvest guideline will be allocated 33% to the northern subarea and 66% to the southern subarea with a subarea dividing line at Point Arena, California. Additionally, the Council directed the Coastal Pelagic Species (CPS) Management Team and staff to begin development of Amendment 11 to the CPS FMP to include alternatives for sardine allocation, as recommended by the CPSAS as well as two additional alternatives. The Council anticipates reviewing the draft analyses and considering formal adoption of allocation alternatives at the April 2005 Council meeting.

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 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). July 20, 2004. NMFS proposed a regulation to implement the annual harvest guideline for Pacific mackerel in the EEZ off the Pacific coast for the fishing season July 1, 2004, through June 30, 2005. 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. (69 FR 43383)

September 14, 2004. Information memorandum. NMFS announced the reallocation of the remaining Pacific sardine harvest guideline in the U.S. EEZ off the Pacific Coast. A regulatory amendment (69 FR 8572, February 25, 2003) requires that NMFS conduct a review of the fishery 10 months after the beginning of the fishing season on January 1, and reallocate any unharvested

portion of the harvest guideline, with 20% allocated north of Point Area, California, and 80% allocated south of Point Arena, California. (69 *FR* 55360)

October 21, 2004. NMFS issued a final rule to implement the annual harvest guideline for the July 1, 2004 - June 30, 2005 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 81,383 mt. Applying the formula in the FMP results in a harvest guideline of 13,268 mt. (69 *FR* 61768)

December 8, 2004. 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, 2005, through December 31, 2005. 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. (69 *FR* 70973)

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. (Page 1 of 2)

| Vessel Name | Coast Guard Number | Year Built | Vessel Age | Registered Measurements (ft) ¹ | | | Calculated Vessel GT ² | Permit No. | Permit GT Endorsement | Permit Transfer Allowance |
|--------------------------------|--------------------|------------|------------|---|---------|-------|-----------------------------------|------------|-----------------------|---------------------------|
| | | | | Length | Breadth | Depth | | | | |
| Misty Moon | D578511 | 1976 | 29 | 49.60 | 19.00 | 10.10 | 63.8 | 1 | 63.8 | 70.2 |
| Paloma | D280452 | 1960 | 45 | 47.40 | 16.50 | 8.30 | 43.5 | 2 | 43.5 | 47.9 |
| St. George II | D238969 | 1939 | 66 | 71.40 | 21.20 | 9.70 | 98.4 | 3 | 98.4 | 108.2 |
| Barbara H | D643518 | 1981 | 24 | 64.90 | 24.00 | 11.60 | 121.1 | 4 | 121.1 | 133.2 |
| San Antonio | D236947 | 1937 | 68 | 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 | 32 | 79.60 | 24.50 | 12.30 | 160.7 | 7 | 160.7 | 176.8 |
| Ferrigno Boy | D602455 | 1978 | 27 | 69.60 | 23.70 | 12.60 | 139.3 | 8 | 139.3 | 153.2 |
| King Phillip | D1061827 | 1997 | 8 | 79.00 | 26.00 | 11.40 | 156.9 | 9 | 156.9 | 172.6 |
| Sea Wave | D951443 | 1989 | 16 | 78.00 | 22.00 | 18.00 | 206.9 | 10 | 206.9 | 227.6 |
| Mary Louise | D247128 | 1944 | 61 | 58.30 | 18.00 | 8.00 | 56.2 | 11 | 56.2 | 61.8 |
| Bainbridge | D236505 | 1937 | 68 | 78.60 | 22.70 | 9.60 | 114.8 | 12 | 114.8 | 126.3 |
| Pioneer | D246212 | 1944 | 61 | 77.80 | 24.30 | 11.20 | 141.9 | 13 | 141.9 | 156.1 |
| Maria | D236760 | 1937 | 68 | 70.70 | 20.50 | 9.20 | 89.3 | 14 | 89.3 | 98.2 |
| St. Joseph | D633570 | 1981 | 24 | 62.90 | 22.00 | 9.10 | 84.4 | 15 | 84.4 | 92.8 |
| <i>Permit No Longer Exists</i> | --- | --- | --- | --- | --- | --- | --- | 16 | --- | --- |
| Retriever | D582022 | 1977 | 28 | 54.20 | 19.60 | 8.70 | 61.9 | 17 | 61.9 | 68.1 |
| Atlantis | D649333 | 1982 | 23 | 49.60 | 19.00 | 10.10 | 63.8 | 18 | 63.8 | 70.2 |
| G. Nazzareno | D246518 | 1944 | 61 | 78.00 | 22.70 | 10.50 | 124.6 | 19 | 124.6 | 137.1 |
| Sea Queen | D582167 | 1974 | 31 | 68.40 | 22.00 | 11.10 | 111.9 | 20 | 111.9 | 123.1 |
| Pacific Leader | D643138 | 1981 | 24 | 59.50 | 21.00 | 9.20 | 77.0 | 21 | 77.0 | 84.7 |
| Chovie Clipper | D524626 | 1970 | 35 | 51.10 | 18.00 | 10.30 | 63.5 | 22 | 63.5 | 69.9 |
| Pacific Journey ⁴ | OR661ZK | 2001 | 4 | 64.30 | 22.01 | 10.30 | 97.7 | 23 | 97.7 | 107.5 |
| Ocean Angle I | D584336 | 1977 | 28 | 49.60 | 19.00 | 10.10 | 63.8 | 24 | 63.8 | 70.2 |
| Maria T | D509632 | 1967 | 38 | 57.30 | 18.10 | 9.80 | 68.1 | 25 | 68.1 | 74.9 |
| Manana | D253321 | 1947 | 58 | 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 | 16 | 58.00 | 21.00 | 9.00 | 73.4 | 28 | 73.4 | 80.7 |
| Sea Queen | D583781 | 1977 | 28 | 49.00 | 16.00 | 8.00 | 42.0 | 29 | 42.0 | 46.2 |
| Little Joe II | D531019 | 1971 | 34 | 50.10 | 16.00 | 7.60 | 40.8 | 30 | 40.8 | 44.9 |
| Caitlin Ann | D960836 | 1990 | 15 | 98.00 | 33.00 | 15.70 | 340.2 | 31 | 340.2 | 374.2 |
| Eldorado | D690849 | 1985 | 20 | 56.00 | 17.00 | 8.60 | 54.9 | 32 | 54.9 | 60.4 |
| Kristen Gail | D618791 | 1980 | 25 | 87.00 | 26.00 | 12.80 | 194.0 | 33 | 194.0 | 213.4 |
| Fiore D'Mare | D550564 | 1973 | 32 | 71.50 | 23.00 | 11.40 | 125.6 | 34 | 125.6 | 138.2 |
| Endurance | D613302 | 1979 | 26 | 49.00 | 16.00 | 8.00 | 42.0 | 35 | 42.0 | 46.2 |
| New Sunbeam | D284470 | 1961 | 44 | 50.30 | 20.00 | 4.00 | 27.0 | 36 | 27.0 | 29.7 |
| Calogera A | D984694 | 1992 | 13 | 57.75 | 21.00 | 10.50 | 85.3 | 37 | 85.3 | 93.8 |
| Eileen | D252749 | 1947 | 58 | 79.40 | 22.10 | 10.20 | 119.9 | 38 | 119.9 | 131.9 |
| Pamela Rose | D693271 | 1985 | 20 | 54.00 | 19.00 | 9.00 | 61.9 | 39 | 61.9 | 68.1 |
| New Stella | D598813 | 1978 | 27 | 58.00 | 22.00 | 8.40 | 71.8 | 40 | 71.8 | 79.0 |
| Traveler | D661936 | 1983 | 22 | 56.00 | 17.00 | 6.90 | 44.0 | 41 | 44.0 | 48.4 |
| Lucky Star | D295673 | 1964 | 41 | 49.90 | 17.00 | 7.30 | 41.5 | 42 | 41.5 | 45.7 |
| Ocean Angel II | D622522 | 1980 | 25 | 74.50 | 28.00 | 10.70 | 149.5 | 43 | 149.5 | 164.5 |
| Crystal Sea ⁷ | D1061917 | 1997 | 8 | 66.00 | 26.00 | 12.00 | 138.0 | 44 | 138.0 | 151.8 |
| Trionfo | D625449 | 1980 | 25 | 63.80 | 19.30 | 9.60 | 79.2 | 45 | 79.2 | 87.1 |
| Corva May ⁶ | D615795 | 1979 | 26 | 49.60 | 19.00 | 10.10 | 63.8 | 46 | 85.0 | 93.5 |
| Heavy Duty | D655523 | 1983 | 22 | 58.00 | 21.30 | 10.20 | 84.4 | 47 | 84.4 | 92.8 |
| Aliotti Bros | D685870 | 1985 | 20 | 67.60 | 26.00 | 9.10 | 107.2 | 48 | 107.2 | 117.9 |
| Lady J | D647528 | 1982 | 23 | 50.30 | 17.00 | 7.10 | 40.7 | 49 | 40.7 | 44.8 |
| Anna S | D253402 | 1947 | 58 | 50.80 | 16.20 | 9.10 | 50.2 | 50 | 50.2 | 55.2 |
| Endeavor | D971540 | 1990 | 15 | 57.40 | 19.00 | 9.90 | 72.3 | 51 | 72.3 | 79.5 |

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. (Page 2 of 2)

| Vessel Name | Coast Guard Number | Year Built | Vessel Age | Registered Measurements (ft) ¹ | | | Calculated Vessel GT ² | Permit No. | Permit GT Endorsement | Permit Transfer Allowance |
|----------------|--------------------|------------|------------|---|---------|-------|-----------------------------------|------------|-----------------------|---------------------------|
| | | | | Length | Breadth | Depth | | | | |
| Antoinette W | D606156 | 1978 | 27 | 45.40 | 16.00 | 7.60 | 7.0 | 52 | 37.0 | 40.7 |
| Donna B | D648720 | 1982 | 23 | 73.20 | 25.00 | 12.90 | 158.2 | 53 | 158.2 | 174.0 |
| Papa George | D549243 | 1973 | 32 | 72.00 | 22.80 | 11.50 | 126.5 | 54 | 126.5 | 139.2 |
| Mercurio Bros | D650376 | 1982 | 23 | 42.00 | 16.70 | 8.60 | 40.4 | 55 | 40.4 | 44.4 |
| Kathy Jeanne | D507798 | 1967 | 38 | 65.90 | 22.20 | 8.80 | 86.3 | 56 | 86.3 | 94.4 |
| Merva W | D532023 | 1971 | 34 | 56.70 | 17.90 | 8.00 | 54.4 | 57 | 54.4 | 59.8 |
| Santa Maria | D236806 | 1937 | 68 | 79.20 | 19.50 | 8.80 | 91.1 | 58 | 91.1 | 100.2 |
| Buccaneer | D592177 | 1978 | 27 | 62.10 | 19.90 | 9.00 | 74.5 | 59 | 74.5 | 82.0 |
| Midnight Hour | D276920 | 1958 | 47 | 61.10 | 18.00 | 8.60 | 63.4 | 60 | 63.4 | 69.7 |
| Nancy B II | D542513 | 1972 | 33 | 56.40 | 18.00 | 8.80 | 59.9 | 61 | 59.9 | 65.9 |
| Miss Kristina | D580843 | 1977 | 28 | 50.00 | 16.00 | 7.40 | 39.7 | 62 | 39.7 | 43.7 |
| Emerald Sea | D626289 | 1980 | 25 | 62.70 | 26.00 | 7.90 | 86.3 | 63 | 86.3 | 94.9 |
| Connie Marie/8 | --- | --- | --- | --- | --- | --- | --- | 64 | 54.5 | 60.0 |
| Theresa Marie | D629721 | 1980 | 25 | 40.90 | 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(Length*Breadth*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.

/7 Permit #44 formerly registered as Mellow Boy was sold and the name changed to Crystal Sea. The permit was transferred to new owner on 01/17/2005.

/8 Connie Marie sank in 2002 and is pending replacement.

Table 4. Vessel age and calculated gross tonnage (GT) for the initial and current limited entry fleet.

| | Initial Fleet | Current Fleet |
|---------------------------------|----------------|---------------|
| Number of Vessels | 65 | 61 |
| Average Vessel Age | 35 years | 33 years |
| Range of Ages | 12 to 66 years | 4 to 68 years |
| Average GT | 71.3 | 88.7 |
| Range of GT | 12.8 to 206.9 | 23.8 to 340.2 |
| Sum of Fleet GT | 4,635.9 | 5,408.4 |
| Capacity Goal (GT) ¹ | --- | 5,650.9 |
| Transferability Trigger | --- | 5,933.5 |

/1 Established in Amendment 10 to the CPS FMP.

Table 5. Number of commercial landings sampled per year by the CDFG port sampling program, 1985-2004.

| Year | Pacific Sardine Landings | Pacific Mackerel Landings | Landings Observed |
|------|--------------------------------|---------------------------------|----------------------|
| 2004 | 168 | 68 | 212 |
| 2003 | 151 | 74 | 194 |
| 2002 | 185 | 92 | 251 |
| 2001 | 143 | 82 | 198 |
| 2000 | 110 | 85 | 182 |
| 1999 | 157 | 70 | 189 |
| 1998 | 97 | 97 | 200 |
| 1997 | 113 | 116 | 184 |
| 1996 | 96 | 85 | 645 |
| 1995 | 254 | 215 | 1276 |
| 1994 | 119 | 116 | 779 |
| 1993 | 85 | 183 | 625 |
| 1992 | 231 | 111 | 370 |
| 1991 | 169 | 185 | 618 |
| 1990 | 100 | 195 | 705 |
| 1989 | 149 | 279 | 1089 |
| 1988 | 190 | 385 | 937 |
| 1987 | 128 | 290 | 1023 |
| 1986 | 105 | 283 | 999 |

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 | Jack- smelt | Herring | White Croaker | M. Squid | Ling- cod | Pac Mack | Y- tail | Jack Mack | Y-fin Tuna | Skip- jack Tuna | Total |
|----|---------|----------------|---------|------------------|-------------|--------------|-------------|------------|--------------|---------------|-----------------------|-------|
| 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 CPS port samplers in Los Angeles County, California, 2001-2004 (Page 1 of 2).

| Finfish | 2001 | 2002 | 2003 | 2004 |
|-------------------------------|------------------|-------------|-------------|-------------|
| | Incidents | | | |
| Anchovy, northern | 10 | 13 | 15 | 14 |
| Baracuda, California | 5 | 2 | | 2 |
| Bass, barred sand | 2 | 5 | 5 | 4 |
| Bass, kelp | 2 | 2 | 5 | |
| Bonito, Pacific | 1 | 1 | | |
| Butterfish, Pacific (Pompano) | 6 | 11 | 10 | 17 |
| Corbina, California | | 5 | | |
| Combfish, longspine | | | 1 | |
| Croaker, white (kingfish) | | | 27 | 19 |
| Croaker, yellowfin | | 1 | | |
| Cusk-eel | 4 | 9 | 5 | 5 |
| Eel, yellow snake | | 1 | 1 | |
| Fish, unspecified | | | 4 | |
| Flatfish, unspecified | 33 | 29 | 10 | 7 |
| Flyingfish | 1 | 2 | 2 | 1 |
| Halibut, California | 8 | 6 | 26 | 16 |
| Jacksmelt | | 3 | 1 | 2 |
| Lizardfish, California | 6 | 9 | 4 | 8 |
| Midshipman, plainfin | | 13 | | |
| Midshipman, specklefin | | | 2 | 5 |
| Midshipman, unspecified | 13 | | 16 | 8 |
| Pipefish, kelp | | | 1 | 4 |
| Sablefish | 3 | | | |
| Sanddab, unspecified | | 1 | 8 | 13 |
| Scorpionfish, California | 26 | 26 | 36 | 38 |
| Sculpin, pithead | | | | 1 |
| Seabass, giant (black) | | 1 | | |
| Senorita | 1 | 1 | | |
| Sole, curlfin | | | 1 | |
| Sole, fantail | | 1 | | |
| Surfperch, pink | | 2 | | |
| Surfperch, unspecified | | 1 | | |
| Toungefish | 3 | 3 | 4 | 8 |
| Topsmelt | | 1 | | |
| Turbot, curlfin | | 1 | | |
| Turbot, diamond | | 1 | | |
| Turbot, hornyhead | | 3 | 16 | 15 |
| Turbot, unspecified | | | 1 | |
| Whitefish, ocean | | 1 | | |
| Total Fish Incidents | 124 | 155 | 201 | 187 |
| Elasmobranchs | | | | |
| Guitarfish, shovelnose | | 1 | 9 | |
| Ray, Bat | | 20 | 34 | 24 |
| Ray, California butterfly | | 1 | | |
| Ray, Pacific electric | 2 | 3 | | 1 |
| Ray, Unspecified | | | 1 | |

Table 7a. Incidental catch recorded by CDFG CPS port samplers in Los Angeles County, California, 2001-2004 (Page 2 of 2).

| | 2001 | 2002 | 2003 | 2004 |
|-------------------------------------|------------------|------------|------------|------------|
| Finfish | Incidents | | | |
| Shark, brown smoothhound | | 1 | | |
| Shark, gray smoothhound | | 1 | | |
| Shark, horn | 4 | | | |
| Shark, Pacific angel | | 1 | | |
| Shark, swell | 1 | | | |
| Shark, Unspecified | 2 | 1 | | |
| Skate, longnose | | | 2 | 3 |
| Skate, thornback | 4 | 5 | 13 | 9 |
| Skate, Unspecified | 4 | 2 | | |
| Stingray, round | 1 | 1 | 5 | 1 |
| Total Elasmobranch Incidents | 18 | 37 | 64 | 38 |
| Invertebrates and Plants | | | | |
| Crab shells | | 1 | 1 | 3 |
| Crab, elbow | | | 1 | |
| Crab, pelagic red | | 6 | | |
| Crab, sheep | | | 1 | |
| Crab, unspecified Rock | 7 | 3 | 3 | 5 |
| Eelgrass | | 3 | 4 | 4 |
| Gorgonians | | 1 | | |
| Jellyfish | | 1 | 2 | 1 |
| Kelp | 55 | 67 | 46 | 58 |
| Lobster, California spiny | 3 | 3 | | |
| Octopus, unspecified | | 3 | | |
| Pleurobranch | | 1 | | |
| Prawn, spot | | 1 | | |
| Salps | | 19 | 3 | 2 |
| Sea cucumber | 2 | 3 | 4 | 1 |
| Sea pansies | | | 1 | |
| Sea star | 2 | 2 | 7 | 1 |
| Shrimp, black-spotted bay | | | 2 | |
| Snail, Unspecified | 1 | | | |
| Squid Egg Cases | 1 | 1 | | 2 |
| Squid, market | 16 | 35 | 25 | 34 |
| Total Invert/Plant Incidents | 87 | 150 | 100 | 111 |
| Total All Incidents | 229 | 342 | 365 | 336 |
| Total Sampled Landings | 195 | 203 | 167 | 180 |

Table 7b. Incidental catch recorded by CDFG CPS port samplers in Monterey County, California, 2001-2004.

| Bycatch Species | 2003 | 2004 |
|-------------------------------------|-------------|-------------|
| Finfish | | |
| Anchovy, northern | 2 | 14 |
| Butterfish, Pacific (Pompano) | 3 | 1 |
| Croaker, white (kingfish) | 9 | 7 |
| Eel, wolf | 1 | |
| Flounder, starry | 2 | 1 |
| Halibut, California | 6 | |
| Grunion, California | | 1 |
| Herring, Pacific | 2 | |
| Jacksmelt | 4 | 1 |
| Sanddab, Pacific | 1 | |
| Sanddab, unspecified | 6 | 2 |
| Scorpionfish, California | 1 | |
| Sculpin, staghorn | 2 | |
| Shad, American | 1 | 4 |
| Smelt, whitebait | 3 | |
| Sole, Sand | 10 | 1 |
| Sole, unspecified | 1 | |
| Sturgeon, unsp. | 1 | |
| Surfperch, walleye | | 1 |
| Surfperch, Unspecified | 2 | |
| Turbot, unspecified | 2 | |
| Total Fish Incidents | 59 | 33 |
| Elasmobranchs | | |
| Ray, Bat | 2 | 4 |
| Shark, shortfin mako | 2 | |
| Shark, spiny dogfish | | 1 |
| Ray, Pacific electric | 2 | |
| Skate, unspecified | 2 | |
| Skate, Big | 2 | |
| Skate, California | 1 | |
| Thornback Skate | 4 | |
| Shark, gray smoothhound | 1 | |
| Total Elasmobranch Incidents | 16 | 5 |
| Invertebrates and Plants | | |
| Crab, decorator | 1 | |
| Crab, Dungeness | 5 | |
| Crab, slender | 2 | |
| Crab, unspecified Rock | 1 | |
| Jellyfish | 3 | 4 |
| Kelp | 2 | |
| Sea star | 3 | |
| Squid Egg Cases | 1 | |
| Squid, market | 3 | 1 |
| Total Invert/Plant Incidents | 21 | 5 |
| Total All Incidents | 96 | 43 |
| Total Observed Landings | 27 | 33 |

Table 8a. Market squid incidental catch for 2002 - 2004. Incidental catch includes species landed with market squid and recorded on landing receipts (round haul gear).

| Species name | 2002 | | 2003 | | 2004 | |
|------------------|--------------------|---------|--------------------|---------|--------------------|---------|
| | Number of Landings | Tons | Number of Landings | Tons | Number of Landings | Tons |
| Pacific sardine | 127 | 1,601.6 | 109 | 1,447.9 | 122 | 1,525.7 |
| Northern anchovy | 19 | 342.6 | 8 | 91.9 | 17 | 616.1 |
| Pacific mackerel | 37 | 71.2 | 16 | 163.2 | 23 | 143.1 |
| Jack Mackerel | 15 | 16.5 | 14 | 33.6 | 19 | 38.8 |
| Jacksmelt | | | 1 | 1.9 | | |
| Surfperch | | | 1 | 0.1 | | |
| Kelpfish | | | | | 1 | 2.2 |
| Bonito | | | | | 1 | 0.01 |

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

| Common Name | Total All Ports | Monterey/ Moss Landing | Santa Barbara/ Ventura | San Pedro/ 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 |
| Cabazon | 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 | | |
| Total number of samples | 394 | 85 | 117 | 192 |

Table 8c. 2003-2004 - Percent frequency of bycatch in observed loads of California market squid by port (Page 1 of 2).

| Common Name | Total All Ports | | San Pedro | | SB/Ventura/PH | | ML/Monterey | |
|-------------------------------|-----------------|------|-----------|------|---------------|------|-------------|------|
| | 2003 | 2004 | 2003 | 2004 | 2003 | 2004 | 2003 | 2004 |
| Finfish | | | | | | | | |
| Anchovy, northern | 4.4 | 5.8 | 4.2 | 4.1 | 5.8 | 7.4 | 3.2 | 5.8 |
| Baracuda, California | 0.2 | | 0.2 | | | | | |
| Bass, barred sand | 0.2 | | 0.2 | | | | | |
| Blacksmith | 0.5 | | 0.5 | | | | | |
| Bonito, Pacific | 0.2 | | 0.2 | | | | | |
| Butterfish, Pacific (Pompano) | 3.3 | 1.6 | 1.7 | 2.0 | 4.2 | | 4.1 | 1.2 |
| Cabezon | 0.2 | | 0.2 | | | | | |
| Combfish, longspine | | 0.7 | | 0.7 | | | | |
| Croaker, queenfish | 0.5 | | 0.5 | | | | | |
| Croaker, white (kingfish) | 0.5 | 0.6 | 0.5 | | | | | 0.6 |
| Croaker, unspecified | | 0.7 | | 0.7 | | | | |
| Cusk-eel | | 0.7 | | 0.7 | | | | |
| Eel, wolf | | 1.2 | | | | | | 1.2 |
| Flatfish, unspecified | | 0.7 | | 0.7 | | | | |
| Flounder, starry | | 1.2 | | | | | | 1.2 |
| Flyingfish | 0.7 | | 0.7 | | | | | |
| Greenling, painted | 0.2 | 0.7 | 0.2 | 0.7 | | | | |
| Halibut, California | 0.9 | | 1.0 | | | | 0.9 | |
| Herring, Pacific | 0.9 | 1.8 | | | | | 0.9 | 1.8 |
| Herring, round | 0.2 | 0.0 | 0.2 | 0.0 | | | | |
| Jack mackerel | 8.1 | 7.5 | 10.5 | 8.2 | 4.2 | 7.4 | 9.6 | 7.0 |
| Jacksmelt | 4.0 | 7.7 | 0.7 | 0.7 | | | 7.3 | 14.6 |
| Lizardfish, California | 0.5 | 0.7 | 0.5 | 0.7 | | | | |
| Mackerel, Pacific | 9.9 | 13.8 | 10.3 | 10.9 | 15.8 | 25.9 | 3.7 | 4.7 |
| Midshipman, unspecified | 0.7 | 1.2 | 0.5 | 0.7 | | | 0.9 | 1.8 |
| Medusa fish | 0.5 | | | | | | 0.5 | |
| Poacher, unspecified | 0.2 | | 0.2 | | | | | |
| Rockfish, blue | 0.5 | | | | | | 0.5 | |
| Rockfish, bocaccio | 0.8 | 0.7 | 0.7 | 0.7 | | | 0.9 | |
| Rockfish, chilipepper | | 1.8 | | | | | | 1.8 |
| Rockfish, olive | 0.2 | | 0.2 | | | | | |
| Rockfish, shortbelly | 0.5 | | | | | | 0.5 | |
| Rockfish, unspecified | 0.4 | | 0.2 | | | | 0.5 | |
| Roughback Sculpin | | 0.7 | | 0.7 | | | | |
| Salema | 1.4 | | | | | | 1.4 | |
| Salmon, chinook | 0.5 | 0.6 | | | | | 0.5 | 0.6 |
| Salmon, unspecified | 0.5 | | | | | | 0.5 | |
| Sanddab, longfin | 0.7 | 0.7 | 0.7 | 0.7 | | | | |
| Sanddab, Pacific | 1.3 | 1.6 | 1.7 | 2.0 | | | 0.9 | 1.2 |
| Sanddab, speckled | 0.4 | 0.7 | 0.2 | 0.7 | | | 0.5 | |
| Sanddab, unspecified | 4.4 | 3.0 | 3.7 | 0.7 | 6.7 | | 2.7 | 5.3 |
| Sardine, Pacific | 24.2 | 24.8 | 18.1 | 21.1 | 42.5 | 44.4 | 11.9 | 8.8 |
| Saury, Pacific | 0.8 | | 0.2 | | | | 1.4 | |
| Scorpionfish, California | 3.2 | 1.4 | 3.2 | 1.4 | | | | |
| Sculpin, unspecified | 1.4 | | | | | | 1.4 | |
| Smelt, night | 0.5 | | | | | | 0.5 | |
| Smelt, true | 0.2 | | 0.2 | | | | | |
| Smelt, unspecified | 0.2 | | 0.2 | | | | | |
| Sole, bigmouth | 0.2 | | 0.2 | | | | | |

Table 8c. 2003-2004 - Percent frequency of bycatch in observed loads of California market squid by port (Page 2 of 2).

| Common Name | Total All Ports | | San Pedro | | SB/Ventura/PH | | ML/Monterey | |
|-------------------------------------|-----------------|-------------|-------------|-------------|---------------|-------------|-------------|-------------|
| | 2003 | 2004 | 2003 | 2004 | 2003 | 2004 | 2003 | 2004 |
| Sole, curlfin | 0.2 | | 0.2 | | | | | |
| Sole, English | 0.6 | | 0.2 | | | | 0.9 | |
| Sole, fantail | 0.5 | | 0.5 | | | | | |
| Sole, sand | 0.9 | 0.6 | | | | | 0.9 | |
| Sole, unspecified | 0.8 | 3.7 | | | 0.8 | 3.7 | | 0.6 |
| Sunfish, ocean | 0.5 | | | | | | 0.5 | |
| Surfperch, kelp | 0.2 | | 0.2 | | | | | |
| Surfperch, pink | 0.2 | | 0.2 | | | | | |
| Surfperch, shiner | | 2.0 | | 2.0 | | | | |
| Surfperch, unspecified | 0.4 | | 0.2 | | | | 0.5 | |
| Topsmelt | 0.2 | 3.7 | 0.2 | | | 3.7 | | |
| Thornyhead, unspecified | 0.2 | | 0.2 | | | | | |
| Turbot, curlfin | 0.6 | | 0.2 | | | | 0.9 | |
| Turbot, diamond | 0.2 | | 0.2 | | | | | |
| Turbot, hornyhead | 1.0 | 0.7 | 1.0 | 0.7 | | | | |
| Turbot, unspecified | 3.7 | 0.7 | | 0.7 | | | 3.7 | |
| Total Fish Incidents | 69.6 | 70.8 | 66.7 | 61.9 | 80.0 | 92.6 | 62.1 | 57.9 |
| Elasmobranchs | | | | | | | | |
| Ray, Bat | 1.2 | 1.3 | 1.5 | 1.4 | 0.8 | | 1.4 | |
| Ray, Pacific electric | | 6.4 | | | | | | 1.2 |
| Ray, thornback | 0.5 | | 0.5 | | | | | 6.4 |
| Ray, unspecified | 0.2 | | 0.2 | | | | | |
| Shark, horn | 0.7 | | 0.5 | | 0.8 | | | |
| Shark, Pacific angel | 0.2 | | 0.2 | | | | | |
| Skate, thornback | | | | | | | | |
| Skate, Unspecified | | | | | | | | |
| Stingray, round | 0.7 | 3.4 | 0.5 | 3.4 | 0.8 | | | |
| Tot. Elasmobranch Incidents | 2.4 | 4.1 | 3.4 | 4.8 | 2.5 | 0.0 | 1.4 | 7.6 |
| Invertebrates and Plants | | | | | | | | |
| Cnidaria (Sea Anenomes) | 3.0 | | 0.5 | | | | 5.5 | |
| Crab shells | 0.7 | | 0.7 | | | | | |
| Crab, box | 0.2 | | 0.2 | | | | | |
| Crab, decorator | 0.2 | | 0.2 | | | | | |
| Crab, Dungeness | 5.0 | 1.2 | | 0.7 | | | 5.0 | |
| Crab, elbow | | | | | | | | 1.8 |
| Hermit crab | 0.2 | | 0.2 | | | | | |
| Crab, purple globe | 0.5 | | 0.5 | | | | | |
| Crab, sheep | 0.7 | | 0.7 | | | | | |
| Crab, rock unspecified | 0.5 | | 0.5 | | | | | |
| Eelgrass | 1.5 | 5.4 | 1.5 | 5.4 | | | | |
| Gorgonians | | 0.7 | | 0.7 | | | | |
| Jellyfish | 7.1 | 15.8 | 0.5 | | | | 13.7 | |
| Kelp | 10.7 | 8.9 | 13.9 | 13.6 | 14.2 | 3.7 | 4.1 | 15.8 |
| Octopus, unspecified | 0.7 | | 0.7 | | | | | 9.4 |
| Salps | 0.2 | 2.7 | 0.2 | 2.7 | | | | |
| Sea cucumber | 1.5 | | 1.5 | | | | | |
| Sea star | 1.1 | 1.9 | 1.0 | 0.7 | 0.8 | 3.7 | 1.4 | |
| Squid Egg Cases | 4.9 | 5.1 | 5.4 | 8.8 | 2.5 | 0.0 | 6.8 | 1.2 |
| Squid, jumbo | 0.2 | 0.7 | 0.2 | 0.7 | | | | 6.4 |
| Tunicates | 0.5 | | 0.5 | | | | | |
| Urchin, purple | 0.7 | | 0.7 | | | | | |
| Total Invert/Plant Incidents | 28.0 | 25.1 | 29.8 | 33.3 | 17.5 | 7.4 | 36.5 | 34.5 |
| Total Observed Landings | 395 | 160 | 192 | 86 | 117 | 32 | 86 | 42 |

Table 9. Expanded salmonid bycatch in Pacific sardine fisheries in Oregon and Washington, 2000-2004

| | Chinook (live) | Chinook (dead) | Coho (live) | Coho (dead) | Pink (live) | Unid (live) | Unid (dead) | Total (live) | Total (dead) | Grand Total |
|------------|-------------------|-------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|----------------|
| 2004 | | | | | | | | | | |
| Oregon | | | | | | | | 518 | 305 | 823 |
| Washington | 35 | 225 | 19 | 105 | 0 | 39 | 0 | 93 | 330 | 423 |
| 2003 | | | | | | | | | | |
| Oregon | | | | | | | | 315 | 185 | 500 |
| Washington | 92 | 262 | 81 | 231 | 0 | 173 | 0 | 346 | 493 | 839 |
| 2002 | | | | | | | | | | |
| Oregon | | | | | | | | 199 | 81 | 280 |
| Washington | 150 | 356 | 61 | 765 | 0 | 200 | 0 | 411 | 1211 | 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, 2004. Oregon did not employ at-sea observers during the 2004 fishery.

| Species | Logbook Data # Caught | Observer Data # Caught |
|------------------|------------------------------|---------------------------|
| Blue shark | 1 | |
| Dogfish shark | 1 | |
| Unknown shark | 2 | |
| Salmon (unknown) | 823 (68% alive; 32% dead) | |
| Mackerel | 118,890 lb | 1,000 lb |
| Anchovy | 5,110 lb | |
| Herring | 5,100 lb | |
| Shad | 6,051 lb | |
| flounder | 2 | |
| squid | 1,510 lb | 1 |
| Jelly fish | | present |

Table 11. List of observed and reported logbook catches of non-targeted species caught in the 2004 Washington sardine fishery (non-expanded numbers of individuals unless otherwise noted).

| Species | Observer Data | | Logbook Data | |
|------------------|----------------|---------|----------------|------|
| | Released Alive | Dead | Released Alive | Dead |
| Anchovy | 0 | 540 lbs | 0 | 0 |
| Blue shark | 0 | 1 | 0 | 0 |
| Chinook salmon | 9 | 58 | 28 | 18 |
| Coho salmon | 5 | 27 | 32 | 16 |
| Dungeness crab | 5 | 0 | 0 | 0 |
| Herring | 23 mt | 3 mt | 0 | 0 |
| Mola mola | 0 | 0 | 1 | 0 |
| Pacific mackerel | 400 | 33,695 | 0 | 0 |
| Sanddab | 1 | 21 | 0 | 0 |
| Skate | 1 | 0 | 0 | 0 |
| Spiny dogfish | 0 | 103 | 0 | 0 |
| Thresher shark | 1 | 0 | 0 | 0 |
| Unid. mackerel | 1 | 1,000 | 0 | 0 |
| Unid. salmon | 6 | 14 | 9 | 1 |
| Unid. shark | 0 | 0 | 0 | 1 |
| Unid. sole | 0 | 2 | 0 | 0 |

Table 12. Species noted as encountered on CDFG Live Bait Logs, 1996-2004.

| Year | Days Fished | Grunion | Smelts | Barracuda | Herring | Stickle-back | Shiner Surfperch | Sea Star | Queenfish | Market Squid | Pacific Bonito |
|------|-------------|---------|--------|-----------|---------|--------------|------------------|----------|-----------|--------------|----------------|
| 2004 | 1,059 | | | 13 | | | | | 1 | 1 | 8 |
| 2003 | 1,123 | | | 23 | | | | | | 2 | |
| 2002 | 1,105 | | | 1 | | | | | 1 | | |
| 2001 | 1,052 | 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 13. Estimates of Pacific sardine and Northern anchovy live bait harvest in California (mt). Data for 1939-1992 from Thomson et al. (1994), and 1993-2004 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 | 2,411 |
| 1967 | 4,898 | 0 | 2000 | 834 | 1,270 |
| 1968 | 6,644 | 0 | 2001 | 1,238 | 1,245 |
| 1969 | 4,891 | 0 | 2002 | 965 | 1,701 |
| 1970 | 5,543 | 0 | 2003 | 1,085 | 3,028 |
| 1971 | 5,794 | 0 | 2004 | 192 | 3,900 |

Table 14. Ratio of anchovy to sardine in reported live bait catch in California, 1994-2004.

| Year | Anchovy | Sardine | Total | Proportion Anchovy | Proportion Sardine |
|------|---------|---------|-------|--------------------|--------------------|
| 2004 | 192 | 3,900 | 4,092 | 0.05 | 0.95 |
| 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 | 0.50 | 0.50 |
| 2000 | 834 | 1,270 | 2,104 | 0.40 | 0.60 |
| 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 15. Commercial harvest (metric tons) of CPS finfish in Ensenada, Baja California, Mexico, for calendar years 1978-2003^{1,2/}. Data from December 2003 onward were not made available. 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 |
| 2004 | n/a | n/a | n/a | n/a |

1/ García F. W. and Sánchez R. F. J. 2003. Análisis de la pesquería de pelágicos menores de la costa occidental de Baja California durante la temporada del 2002. Boletín Anual 2003. Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación. Instituto Nacional de la Pesca. Centro Regional de Investigación Pesquera de Ensenada, Cámara Nacional de la Industria Pesquera y Acuícola, Delegación Baja California. 15 p.

2/ Landings for Jan-Nov 2003 were provided by Dr. Celia Eva-Cotero, CRIP Instituto Nacional de la Pesca, Ensenada (pers. comm.).

Table 16. Pacific sardine population numbers at age, Age 1+ biomass, and spawning stock biomass (SSB) at the beginning of each biological year, 1983-2005 (Conser et al. 2004). Landings during the course of each biological year are also provided (landings for 2005 are projected). Recruitment is shown as Age 0 population numbers. The biological year begins on July 1st and extends through June 30th of the labeled year. The Age 1+ biomass estimated for 2005 served as the basis for setting a harvest guideline for the U.S. fishery in calendar year 2005.

| Biological Year | Population Numbers at Age (millions) | | | | | | Biomass (1,000 MT) | | |
|--------------------|--------------------------------------|-------|-------|-------|-------|-------|--------------------|-------|----------|
| | 0 | 1 | 2 | 3 | 4 | 5+ | Ages 1+ | SSB | Landings |
| 1983 | 146 | 15 | 9 | 5 | 3 | 2 | 5 | 4 | 0.5 |
| 1984 | 256 | 97 | 9 | 5 | 3 | 3 | 13 | 9 | 0.4 |
| 1985 | 329 | 171 | 63 | 6 | 3 | 4 | 29 | 21 | 4 |
| 1986 | 336 | 211 | 103 | 37 | 4 | 5 | 45 | 34 | 2 |
| 1987 | 891 | 224 | 138 | 64 | 23 | 5 | 59 | 49 | 3 |
| 1988 | 1,096 | 592 | 146 | 86 | 41 | 19 | 107 | 79 | 6 |
| 1989 | 1,978 | 729 | 381 | 87 | 53 | 39 | 162 | 127 | 5 |
| 1990 | 1,954 | 1,319 | 479 | 242 | 56 | 61 | 267 | 202 | 15 |
| 1991 | 2,229 | 1,289 | 846 | 298 | 154 | 77 | 347 | 279 | 21 |
| 1992 | 3,650 | 1,466 | 821 | 521 | 188 | 150 | 418 | 344 | 35 |
| 1993 | 2,866 | 2,348 | 889 | 490 | 321 | 218 | 549 | 429 | 74 |
| 1994 | 5,609 | 1,738 | 1,231 | 448 | 267 | 329 | 540 | 453 | 32 |
| 1995 | 8,078 | 3,611 | 1,053 | 733 | 276 | 387 | 767 | 598 | 66 |
| 1996 | 5,594 | 5,111 | 2,084 | 593 | 434 | 426 | 1,084 | 821 | 63 |
| 1997 | 4,943 | 3,597 | 3,080 | 1,235 | 364 | 557 | 1,193 | 986 | 66 |
| 1998 | 7,346 | 3,198 | 2,204 | 1,860 | 768 | 601 | 1,206 | 1,033 | 131 |
| 1999 | 7,859 | 4,549 | 1,754 | 1,171 | 1,054 | 856 | 1,258 | 1,030 | 114 |
| 2000 | 4,733 | 4,857 | 2,478 | 924 | 659 | 1,191 | 1,347 | 1,087 | 111 |
| 2001 | 3,393 | 2,907 | 2,587 | 1,271 | 509 | 1,163 | 1,189 | 1,017 | 106 |
| 2002 | 7,162 | 2,136 | 1,648 | 1,399 | 705 | 1,020 | 1,001 | 889 | 108 |
| 2003 | 2,833 | 4,506 | 1,204 | 881 | 763 | 1,029 | 1,105 | 873 | 137 |
| 2004 | 9,114 | 1,771 | 2,503 | 622 | 454 | 1,011 | 913 | 818 | 105 |
| 2005 | 4,013 | 5,831 | 1,052 | 1,384 | 331 | 827 | 1,194 | 902 | 110 |

Table 17. Annual U.S. Pacific sardine landings and harvest guidelines (metric tons) by state and management subarea, 1981-2004.

| Year | California | | | | | | Management Subarea ¹⁾ Landings | | | Harvest Guidelines by Subarea ¹⁾ | | |
|------|------------|-------------|-------------|------------------|----------|------------|---|----------|----------|---|----------|-----------|
| | So. Calif. | Cen. Calif. | No. of 39°N | California Total | Oregon | Washington | Southern | Northern | Total | Southern | Northern | Total |
| 1981 | 34.4 | 0.0 | 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 | 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 | 0.0 | 0.6 | 0.0 | 0.0 | 0.6 | 0.0 | 0.6 | n/a | n/a | n/a |
| 1984 | 0.9 | 0.3 | 0.0 | 1.2 | 0.0 | 0.0 | 0.9 | 0.3 | 1.2 | n/a | n/a | n/a |
| 1985 | 3.7 | 2.2 | 0.0 | 5.9 | 0.0 | 0.0 | 3.7 | 2.2 | 5.9 | n/a | n/a | n/a |
| 1986 | 304.0 | 84.4 | 0.0 | 388.4 | 0.0 | 0.0 | 304.0 | 84.4 | 388.4 | n/a | n/a | n/a |
| 1987 | 391.6 | 47.8 | 0.0 | 439.4 | 0.0 | 0.0 | 391.6 | 47.8 | 439.4 | n/a | n/a | n/a |
| 1988 | 1,185.4 | 3.0 | 0.0 | 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 | 0.0 | 836.7 | 0.0 | 0.0 | 598.7 | 238.0 | 836.7 | n/a | n/a | n/a |
| 1990 | 1,537.1 | 127.1 | 0.0 | 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 | 0.0 | 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 | 0.0 | 17,949.5 | 4.0 | 0.0 | 14,821.9 | 3,131.6 | 17,953.5 | n/a | n/a | n/a |
| 1993 | 14,669.6 | 675.6 | 0.0 | 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 | 5.0 | 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 | 2.0 | 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 | 0.5 | 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 | 0.0 | 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 | 21.0 | 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 | 0.0 | 59,263.5 | 775.5 | 1.0 | 42,017.2 | 18,022.8 | 60,040.0 | n/a | n/a | n/a |
| 2000 | 42,248.0 | 11,367.5 | 0.0 | 53,615.5 | 9,527.9 | 4,842.0 | 42,248.0 | 25,737.4 | 67,985.4 | 124,527.3 | 62,263.7 | 186,791.0 |
| 2001 | 44,721.5 | 7,103.5 | 0.5 | 51,825.0 | 12,780.3 | 11,127.1 | 44,721.5 | 31,010.9 | 75,732.4 | 89,824.7 | 44,912.3 | 134,737.0 |
| 2002 | 44,464.0 | 13,881.0 | 0.0 | 58,345.0 | 22,710.8 | 15,832.4 | 44,464.0 | 52,424.2 | 96,888.2 | 78,961.3 | 39,480.7 | 118,442.0 |
| 2003 | 24,832.0 | 7,907.5 | 14.0 | 32,739.5 | 25,257.6 | 11,920.1 | 32,739.5 | 37,177.7 | 69,917.2 | 73,938.7 | 36,969.3 | 110,908.0 |
| 2004 | 32,393.4 | 15,284.8 | 23.6 | 47,701.8 | 36,110.7 | 8,934.3 | 47,678.2 | 45,068.6 | 92,746.8 | 81,831.3 | 40,915.7 | 122,747.0 |
| 2005 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 90,786.0 | 45,393.0 | 136,179.0 |

¹⁾ As of 2003, the 'Southern Subarea' comprises fisheries and landings from Pt. Arena (39°N latitude) to the Mexican border.

Table 18. West Coast Pacific sardine landings by country, 1981-2004.

| Year | Ensenada 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 | 388.4 | 0.0 | 631.0 |
| 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 | 42,956.4 | 745.0 | 91,513.6 |
| 1999 | 58,569.4 | 60,039.0 | 1,250.0 | 119,858.4 |
| 2000 | 51,172.9 | 67,985.4 | 1,718.0 | 120,876.3 |
| 2001 | 22,246.0 | 75,732.4 | 1,600.0 | 99,578.4 |
| 2002 | 43,436.4 | 96,888.2 | 1,044.0 | 141,368.6 |
| 2003 | 30,537.0 | 69,917.2 | 954.0 | 101,408.2 |
| 2004 | n/a | 92,746.8 | 4,258.8 | n/a |

Table 19. RecFIN estimated recreational harvest of Pacific (chub) mackerel in California by fishing mode (type A+B) estimate in metric tons), 1980-2004.

| Year | Southern California | Northern California | Oregon | Washington | Total |
|------|---------------------|---------------------|--------|------------|---------|
| 1980 | 2,745.3 | 9.1 | 0.0 | 0.0 | 2,754.4 |
| 1981 | 1,225.6 | 168.8 | 0.0 | 0.0 | 1,394.5 |
| 1982 | 1,554.7 | 112.8 | 0.0 | 0.0 | 1,667.5 |
| 1983 | 1,341.3 | 126.0 | 1.5 | 0.0 | 1,468.9 |
| 1984 | 1,257.4 | 187.7 | 0.2 | 0.0 | 1,445.4 |
| 1985 | 1,028.0 | 48.6 | 0.0 | 0.0 | 1,076.6 |
| 1986 | 968.2 | 34.3 | 0.0 | 0.0 | 1,002.6 |
| 1987 | 1,257.7 | 13.5 | 0.0 | 0.0 | 1,271.2 |
| 1988 | 778.9 | 21.2 | 0.0 | 0.0 | 800.1 |
| 1989 | 605.6 | 5.0 | 0.0 | 0.0 | 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 | 2.1 | 0.0 | 624.0 |
| 1994 | 933.4 | 13.8 | 0.2 | 0.0 | 947.3 |
| 1995 | 1,022.9 | 3.4 | 0.1 | 0.0 | 1,026.4 |
| 1996 | 664.0 | 29.8 | 0.1 | 0.0 | 694.0 |
| 1997 | 568.6 | 398.4 | 0.3 | 0.0 | 967.3 |
| 1998 | 425.6 | 22.6 | 0.0 | 1.0 | 449.3 |
| 1999 | 193.0 | 3.0 | 0.2 | 0.3 | 196.6 |
| 2000 | 248.6 | 1.4 | 0.1 | 0.0 | 250.1 |
| 2001 | 557.5 | 3.9 | 0.0 | 0.0 | 561.4 |
| 2002 | 279.1 | 0.0 | 0.1 | 0.0 | 279.2 |
| 2003 | 340.6 | 0.8 | 0.0 | 0.0 | 341.4 |
| 2004 | 330.4 | 1.3 | 0.0 | 0.0 | 331.7 |

Notes from RecFIN query:

1. No data in from 1990 to 1992.
2. No data in wave 1 1995.
3. Data in 2004 are preliminary and may be incomplete.
4. Northern California charter boats were not fully sampled due to refusals.
5. Year 2002 California Party Charter (PC) estimates from PC Phone Survey.

Table 20. RecFIN estimated recreational harvest of Pacific (chub) mackerel by subregion (type A+B1 estimate in metric tons), 1980-2004. Landing estimates for 'Man Made Structures' and 'Beach/Bank' modes were pooled into the 'Shore Modes' column.

| Year | Shore | Private/Rental | Party/Charter | Total |
|------|-------|----------------|---------------|---------|
| 1980 | 424.8 | 1,009.2 | 1,320.5 | 2,754.4 |
| 1981 | 288.1 | 515.7 | 590.7 | 1,394.5 |
| 1982 | 274.7 | 527.6 | 865.1 | 1,667.5 |
| 1983 | 361.9 | 403.8 | 701.7 | 1,467.3 |
| 1984 | 281.9 | 585.5 | 577.7 | 1,445.1 |
| 1985 | 142.0 | 389.8 | 544.7 | 1,076.6 |
| 1986 | 91.6 | 390.9 | 520.1 | 1,002.6 |
| 1987 | 450.8 | 575.8 | 244.6 | 1,271.2 |
| 1988 | 105.5 | 455.4 | 239.1 | 800.1 |
| 1989 | 256.7 | 219.1 | 134.8 | 610.6 |
| 1990 | n/a | n/a | n/a | n/a |
| 1991 | n/a | n/a | n/a | n/a |
| 1992 | n/a | n/a | n/a | n/a |
| 1993 | 88.7 | 361.5 | 171.7 | 621.9 |
| 1994 | 205.9 | 496.2 | 245.0 | 947.1 |
| 1995 | 121.2 | 531.8 | 373.4 | 1,026.3 |
| 1996 | 93.4 | 281.1 | 319.3 | 693.8 |
| 1997 | 148.2 | 650.4 | 168.3 | 967.0 |
| 1998 | 96.7 | 220.4 | 131.1 | 448.2 |
| 1999 | 62.4 | 72.9 | 60.7 | 196.0 |
| 2000 | 51.3 | 121.9 | 76.8 | 250.0 |
| 2001 | 347.0 | 162.2 | 52.2 | 561.4 |
| 2002 | 92.9 | 160.5 | 25.7 | 279.1 |
| 2003 | 208.4 | 107.7 | 25.3 | 341.3 |
| 2004 | 247.8 | 64.1 | 19.8 | 331.7 |

Notes from RecFIN query:

1. No data in from 1990 to 1992.
2. No data in wave 1 1995.
3. Data in 2004 are preliminary and may be incomplete.
4. Northern California charter boats were not fully sampled due to refusals.
5. Year 2002 California Party Charter (PC) estimates from PC Phone Survey.

Table 21. West coast landings (mt) and real¹ exvessel revenues (\$ 2004) for Pacific sardine, Pacific mackerel², jack mackerel, anchovy and market squid, 1981-2004.

| Year | Pacific Sardine mt | Pacific Sardine Rev | Pacific Mackerel mt | Pacific Mackerel Rev | Jack Mackerel mt | Jack Mackerel Rev | Anchovy mt | Anchovy Rev | Squid mt | Squid Rev |
|------|--------------------------|---------------------------|---------------------------|----------------------------|------------------------|-------------------------|---------------|----------------|-------------|--------------|
| 1981 | 15 | \$5,526 | 35,388 | \$13,333,140 | 17,778 | \$6,687,721 | 52,309 | \$5,993,118 | 23,510 | \$9,296,677 |
| 1982 | 2 | \$929 | 36,065 | \$12,534,475 | 19,617 | \$6,875,844 | 42,155 | \$3,735,766 | 16,308 | \$6,232,688 |
| 1983 | 1 | \$290 | 41,479 | \$13,334,017 | 9,829 | \$2,976,475 | 4,430 | \$692,785 | 1,824 | \$1,256,370 |
| 1984 | 1 | \$1,390 | 44,084 | \$13,252,013 | 9,149 | \$2,188,152 | 2,899 | \$663,623 | 564 | \$485,062 |
| 1985 | 6 | \$2,195 | 37,772 | \$10,222,548 | 6,876 | \$2,005,949 | 1,638 | \$366,084 | 10,276 | \$6,166,362 |
| 1986 | 388 | \$124,210 | 48,089 | \$12,102,811 | 4,777 | \$1,284,956 | 1,557 | \$500,862 | 21,278 | \$6,872,691 |
| 1987 | 439 | \$92,454 | 46,725 | \$9,895,138 | 8,020 | \$1,750,621 | 1,467 | \$458,211 | 19,984 | \$5,854,539 |
| 1988 | 1,188 | \$227,740 | 50,864 | \$12,116,658 | 5,068 | \$1,137,858 | 1,518 | \$573,061 | 37,232 | \$11,250,640 |
| 1989 | 837 | \$268,892 | 47,713 | \$9,740,637 | 10,745 | \$2,308,504 | 2,511 | \$920,907 | 40,893 | \$10,368,541 |
| 1990 | 1,664 | \$263,649 | 40,092 | \$7,096,588 | 3,223 | \$577,310 | 3,259 | \$842,618 | 28,447 | \$6,298,996 |
| 1991 | 7,587 | \$1,144,521 | 32,019 | \$6,837,898 | 1,712 | \$318,705 | 4,068 | \$832,567 | 37,389 | \$7,784,214 |
| 1992 | 17,954 | \$2,324,733 | 19,045 | \$5,020,377 | 1,526 | \$299,375 | 1,166 | \$280,227 | 13,110 | \$3,067,625 |
| 1993 | 15,347 | \$1,892,460 | 12,129 | \$1,845,679 | 1,950 | \$337,231 | 2,003 | \$585,244 | 42,830 | \$12,575,870 |
| 1994 | 11,644 | \$1,817,106 | 10,293 | \$1,723,087 | 2,906 | \$457,055 | 1,859 | \$661,008 | 55,892 | \$17,187,458 |
| 1995 | 40,256 | \$4,179,831 | 8,823 | \$1,351,668 | 1,877 | \$342,906 | 2,016 | \$433,206 | 70,252 | \$26,204,233 |
| 1996 | 32,553 | \$3,634,771 | 9,729 | \$1,519,122 | 2,438 | \$352,034 | 4,505 | \$807,786 | 80,561 | \$25,212,878 |
| 1997 | 43,290 | \$5,038,819 | 20,168 | \$3,155,990 | 1,534 | \$280,453 | 5,778 | \$920,413 | 70,329 | \$23,432,646 |
| 1998 | 43,312 | \$4,064,590 | 21,560 | \$2,848,796 | 1,777 | \$429,351 | 1,584 | \$275,028 | 2,895 | \$1,821,764 |
| 1999 | 60,368 | \$5,727,371 | 9,094 | \$1,209,220 | 1,579 | \$222,499 | 5,311 | \$1,061,045 | 92,014 | \$36,911,125 |
| 2000 | 68,034 | \$7,886,152 | 22,042 | \$3,167,815 | 1,451 | \$296,763 | 11,831 | \$1,564,069 | 118,903 | \$29,486,376 |
| 2001 | 75,801 | \$9,640,387 | 7,618 | \$1,315,505 | 3,839 | \$646,505 | 19,345 | \$1,515,227 | 86,203 | \$17,898,926 |
| 2002 | 96,897 | \$11,028,879 | 3,744 | \$546,024 | 1,026 | \$216,698 | 4,882 | \$648,192 | 72,878 | \$18,985,897 |
| 2003 | 71,864 | \$7,435,930 | 4,213 | \$675,977 | 231 | \$74,596 | 1,929 | \$349,141 | 44,990 | \$25,889,634 |
| 2004 | 89,623 | \$10,074,474 | 3,708 | \$574,948 | 1,160 | \$269,161 | 7,104 | \$820,178 | 39,596 | \$19,486,285 |

Source: PacFIN - 1981-2001 data extracted April 2004, 2002-2004 data extracted May 2005

¹Real values are current values adjusted to eliminate the effects of inflation. This adjustment has been made by dividing current values by the current year GDP implicit price deflator, with a base year of 2004.

²Pacific mackerel landings and revenues also include landings and revenues of unspecified mackerel.

Figure 1. Distribution of jack mackerel and northern anchovy eggs collected during CalCOFI cruise 0504 (April 2005) using the Continuous Underway Fish Egg Sampler (CUFES). Source: <http://swfsc.ucsd.edu/frd/CalCOFI/CurrentCruise/currentcruise.htm>.

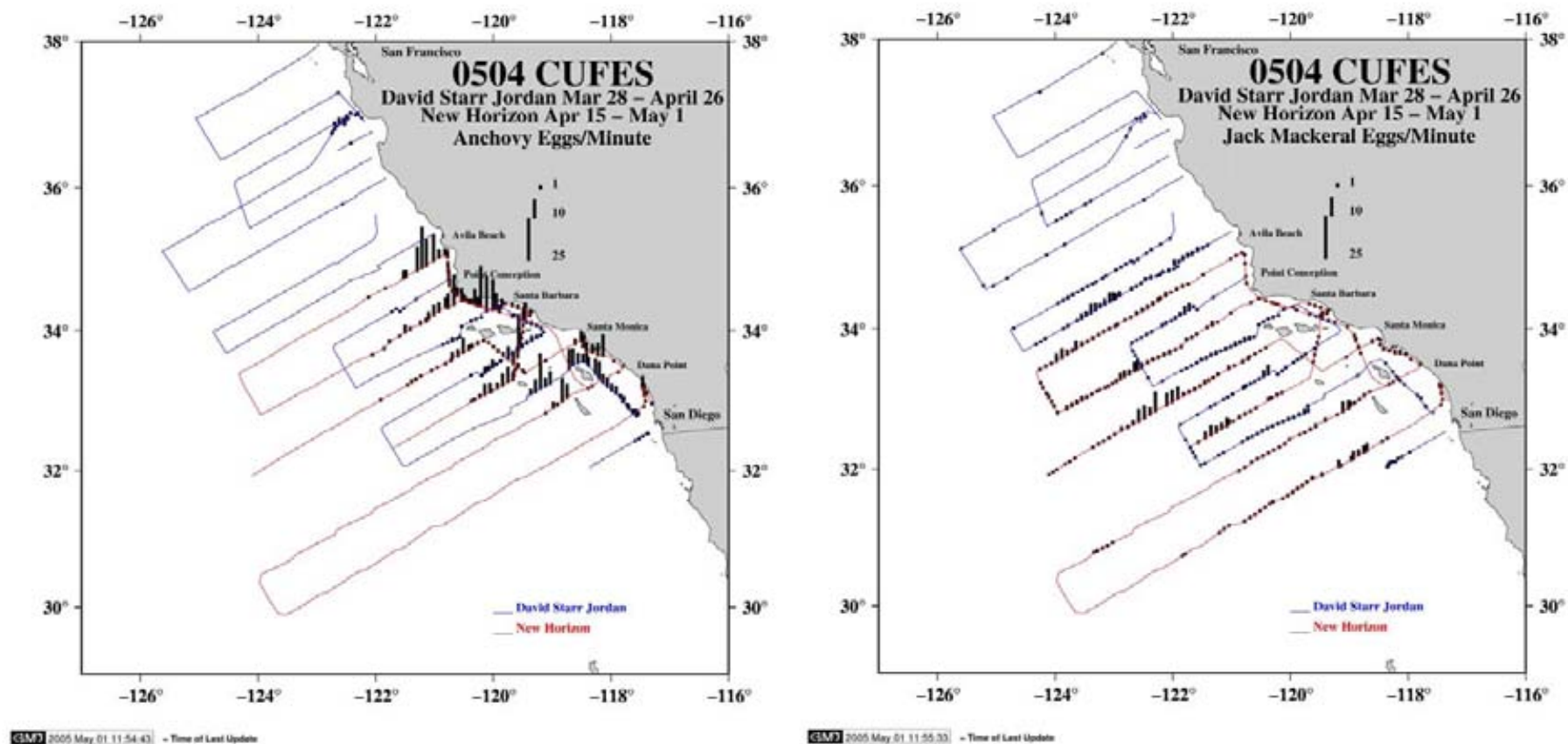


Figure 2. Annual Pacific coast landings and real exvessel revenues for all CPS species, 1981-2004.

