

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 $GT=0.67(\text{Length}*\text{Breadth}*\text{Depth})/100$. 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.

/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		
Seniorita	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>.

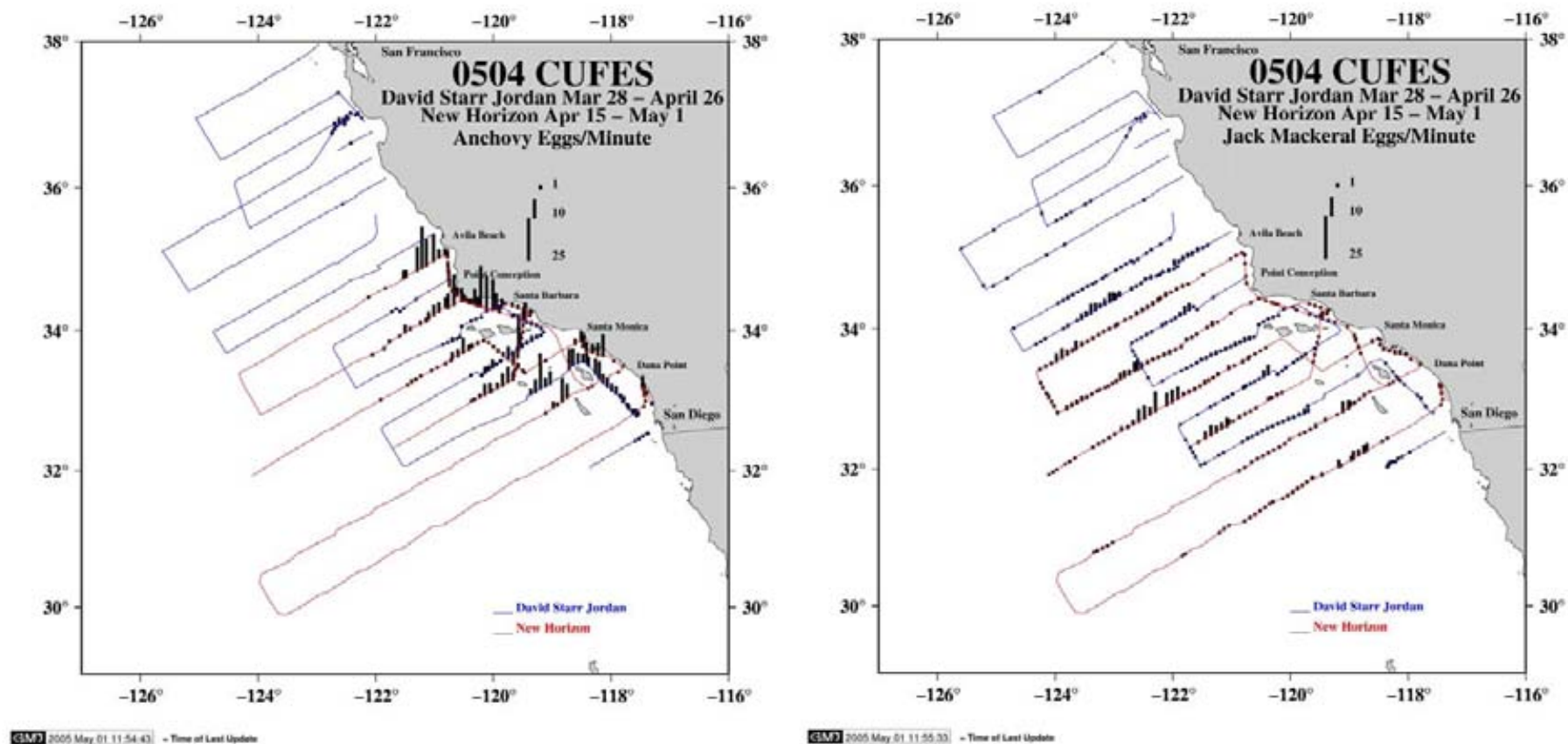


Figure 2. Annual Pacific coast landings and real exvessel revenues for all CPS species, 1981-2004.

