



Annual Review of White Seabass Fishery Management For 2003-2004

as established in the Marine Life Management Act, Fish and Game Code Section 7070,
and Section 51.02, Title 14, California Code of Regulations

Department of Fish and Game
Marine Region

Issue

The White Seabass Fishery Management Plan (WSFMP) was adopted in 2002 by the Commission. Included in the WSFMP is an annual review requirement that incorporates recent fishery-independent data (e.g., recruitment surveys) and fishery-dependent data (e.g., commercial and recreational landings and length frequencies), along with information about the harvest of white seabass in Mexico. The review is based on the fishing season, September 1 through August 31 of the following year. Annual reviews are conducted so that any changes to management, or to the WSFMP, can be considered by the Commission in accordance with the requirements of the Marine Life Management Act.

Background

The White Seabass Scientific and Constituent Advisory Panel (Panel) met in February 2005 to consider if current management measures were providing adequate protection for the white seabass resource. Regulations adopted to implement the WSFMP established a Points of Concern process to evaluate the status of the resource. Each year the Panel is to review current information relative to the Points of Concern. If a resource conservation issue exists based on the Points of Concern, the Panel will provide its recommendation, rationale, and analysis to the Department who will recommend to the Commission the appropriate management measure(s) that will address the issue(s).

Results

Analysis of the Points of Concern (Table 1) showed that none of the criteria were met in 2003-2004 period; however recent changes in the data for 2001 revealed that the first Point of Concern had been met in 2001-2002. This Point of Concern, whether the total catch exceeded the Optimum Yield (OY) (1.20 million pounds), was not met in 2003-2004 because the total catch was 467,000 pounds (Appendix A, Figure 1). This represents a 48 percent decrease compared to 2002-2003 (total catch was 973,000 pounds). At the time of the 2002-2003 review, the total catch for 2001-2002 totaled 1.196 million pounds. A change in the recreational catch database added almost 100,000 pounds, resulting in the total catch (1.28 million pounds) slightly exceeding the OY in 2001-2002. The increase in total catch for 2001-2002 was due to a strong 1997 year class (Appendix A, Figure 2) which recruited to both fisheries in 2001-2002 and greatly increased white seabass availability. In subsequent years, the year class strength returned to previous levels resulting in lower white seabass catches in recent years for both the recreational and commercial fisheries. The Panel and the

Department agree that despite exceeding the OY in 2001-2002, there is no need to consider any management changes at this time.

The next four Points of Concern consider new information regarding white seabass, including any changes in the biological characteristics (age composition, size composition, age at maturity, or age at recruitment), changes to the availability of a forage species upon which the white seabass depends, any new information about the status of white seabass, and whether any errors in the data or stock assessment were found. A review of the information on white seabass revealed no changes in the biological characteristics for which there is information (size composition) (Appendix A, Figures 3 and 4) or the forage of white seabass (Appendix A, Figure 5). Additionally, there was no new information on the status of white seabass, nor were any significant errors found in the data or stock assessment. Thus, the Panel and Department agree that none of the four Points of Concern were met.

Table 1. Analysis of the Points of Concern.

Criteria	Analysis	Result
Total catch is expected to exceed the current harvest guideline or quota.	2003-2004 total catch = 466,957 lbs Below Optimum Yield Optimum Yield = 1.2 million pounds	no action necessary
Any adverse or significant change in the biological characteristics of white seabass (age composition, size composition, age at maturity, or recruitment) is discovered.	Recreational and commercial fishery length-frequencies showed no change No new information on age composition, age at maturity, or age at recruitment No changes	no action necessary
An adverse or significant change is discovered in either the availability or the status of a forage species that white seabass is dependent upon.	Forage species landings are fairly stable. The five major species are included within the Federal Coastal Pelagic Species FMP. No changes	no action necessary
New information on the status of white seabass is discovered.	No new information	no action necessary
An error in data or stock assessment is detected that significantly changes estimates of impacts due to current management.	No significant errors detected Minor adjustments to the recreational and commercial catch estimates were made to correct errors.	no action necessary
An overfishing condition exists or is imminent.	See analysis in Table 2.	no action necessary

The final point of concern is whether an overfishing condition exists or is eminent and is based on three criteria (Table 2). For the commercial fishery, there must be a 20 percent decline in landings in each of two consecutive seasons compared to the prior five-season running average. Commercial landings of white seabass (Figure 1) totaled 483,348 pounds in 2002-2003; a 96 percent increase compared to the five-season average (246,699 pounds). In 2003-2004, commercial landings totaled 290,805 pounds; an eight percent decline compared to the five-season average (316,507 pounds). The Panel and the Department agree that although commercial landings declined in 2003-2004, the overfishing criterion was not met.

For the recreational fishery, the overfishing criteria include a 20 percent decline in each of two consecutive seasons for both the average weight and average number of fish

caught. The recreational fishery results were more variable than the commercial fishery results. In the recreational fishery, the number of fish caught in both the 2002-2003 and 2003-2004 seasons decreased significantly (40 and 70 percent, respectively) compared to the previous season (Figure 2). However, the average weight of fish increased in both seasons (18 and 12 percent, respectively) (Figure 2).

The large decrease in the number of white seabass caught may be due to several factors. First, the 2001 private boat effort estimate, from the Marine Recreational Fishery Statistical Survey (MFRSS), was more than twice as high as the previous year, and resulted in a much higher catch of white seabass by the private boat sector (2.6 times higher than the previous season) (Appendix A, Figure 6). In 2002, the private boat effort estimate returned to previous levels, and so did the white seabass catch. Second, the 1997 year class was very strong and these fish recruited to the fishery in 2001-2002, increasing availability and catch. Finally, in 2004 the Department started a new sampling program, the California Recreational Fishery Survey (CRFS) to replace MRFSS. CRFS catch estimates appear much lower for most species than MRFSS because the method of determining the effort estimate is significantly different. The Department is working to calibrate the two sampling programs so that the catch estimates can be directly compared. The Panel and the Department agree that despite greater than 20 percent declines in the recreational catch (number of fish) in two consecutive seasons, there is no need to make any management changes as the juvenile recruitment has held steady the last five years (see below) and there is no concurrent decline in the average weight of fish for the last two seasons.

The final criterion for determining if an overfishing condition exists is a 30 percent decline in the recruitment index for juvenile white seabass compared to the five-season average of recruitment (Figure 3). Each season, the Ocean Resources Enhancement and Hatchery Program (OREHP) conducts standardized field studies for juvenile recruitment. The results of these field studies show a 14 percent decline in the 2003-2004 index compared to the previous five-year average. Thus, the Panel and the Department agree that the criterion was not met.

Table 2. Analysis to determine if the white seabass resource is overfished.

Criteria	Analysis	Result
A 20 percent decline in the total annual commercial landings of white seabass for the past two consecutive seasons compared to the prior five-season average of landings, based on landing receipt data. Source: CFIS landing receipt data.	2003-2004 = 290,804 lbs = 8% decline five-season average = 316,416 lbs 2002-2003 = 483,348 lbs = 96% increase five-season average = 246,708 lbs (Figure 1)	no action necessary
A 20 percent decline in both the number of fish and the average size of white seabass caught in the recreational fishery for the same two consecutive seasons, as determined by the best available data. Source: MFRSS and CRFS survey data.	2003-2004 = 9,130 fish = 70% decline average weight = 19.1 lbs = 12% increase 2002-2003 = 30,315 fish = 40% decline average weight = 17.1 lbs = 18% increase 2001-2002 = 50,133 fish average weight = 14.5 lbs (Figure 2)	no action necessary
A 30 percent decline in recruitment indices for juvenile white seabass compared to the prior five-season average of recruitment, as determined by the best available data. Source: OREHP field study data.	2003-2004 = 1,106 fish = 14% decline five-season average = 1,290 fish (Figure 3)	no action necessary

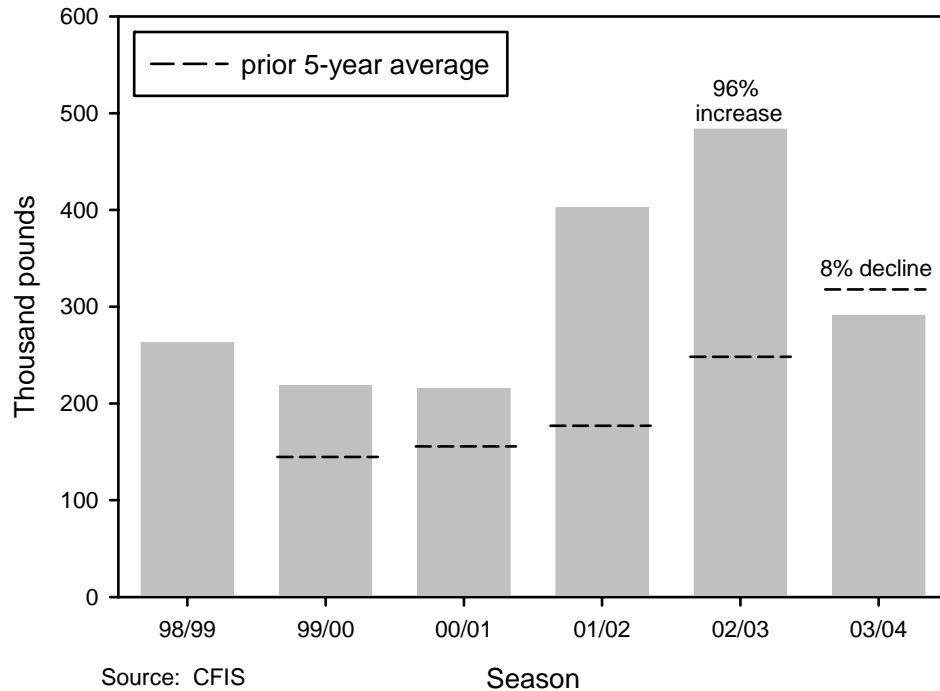


Figure 1. Commercial white seabass landings, 2001-2002 to 2003-2004.

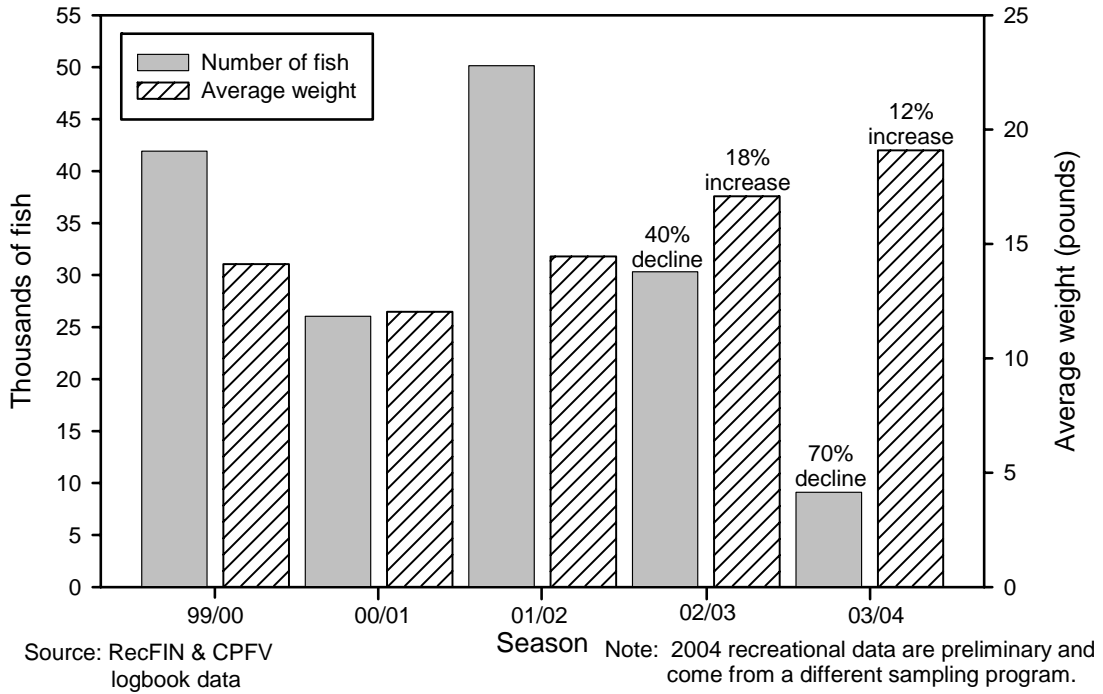


Figure 2. Trends in the recreational white seabass catch, 1999-2000 to 2003-2004.

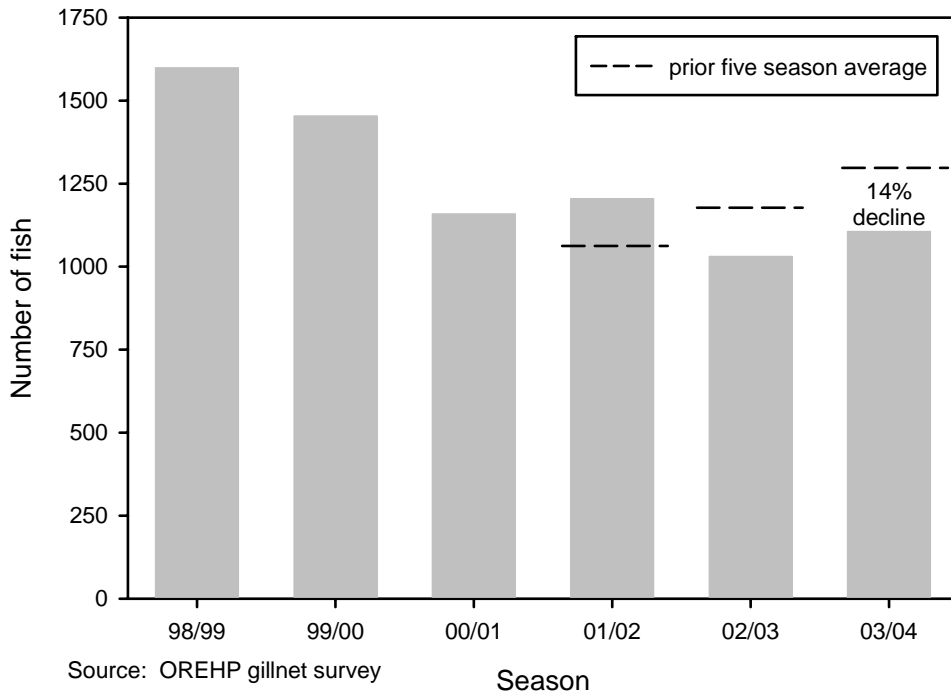


Figure 3. Juvenile white seabass recruitment survey, 1998-99 to 2003-04.

Additional Information

The Panel was provided with social and economic information for the commercial fishery. For the last ten years, the number of gillnet vessels and the number of vessels using miscellaneous gears has remained fairly steady (Appendix A, Figure 7). However, the size of the hook-and-line fleet varies from year to year, depending on white seabass availability. The most common (mode) ex-vessel price paid to commercial fishermen has remained constant at \$2.50 per pound for the last ten years, ranging from 0.01 - \$9.00 per pound. No similar social or economic data are available for the recreational fleet.

The scant information about the take of white seabass in Mexico was also presented to the Panel. Since no California fishermen are allowed to fish commercially in Mexico, there are no landing receipt data to estimate commercial landings. Recreational fishermen are allowed to fish in Mexican waters with a Mexican fishing license. CPFV logbook data shows a small increase in the number of white seabass caught by California fishermen in Mexico from 133 in 2002-2003 to 144 in 2003-2004. While some sampling of private recreational boat trips to Mexico does take place, no catch estimates are produced so the take by these vessels is unknown. No information about either the recreational or commercial catch of white seabass by Mexico is available.

Summary

The Panel determined that none of the Points of Concern were met during the review of the 2003-2004 season. The Panel also reviewed fishery-dependent and fishery-independent data for the same time period and determined that the white seabass population was not overfished. The social and economic information along with the Mexican catch information supports the Panel's conclusions. As a result, the Department does not recommend any changes to the management of white seabass or to the WSFMP at this time.

The Panel unanimously agreed that the OREHP juvenile recruitment survey provides important information on the status of white seabass and other California species and that funding for this survey should be preserved, if possible, outside of the OREHP program because the survey provides information on more than just white seabass.

Appendix A

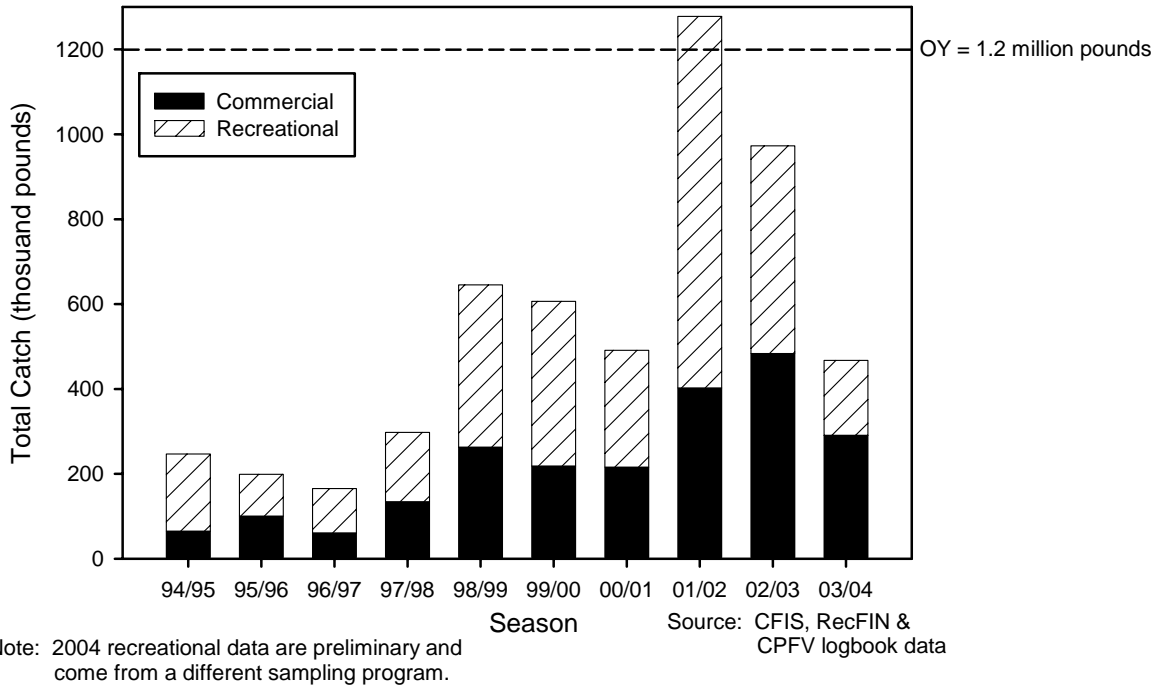


Figure 1. Total white seabass catch (pounds), 1994-1995 - 2003-2004.

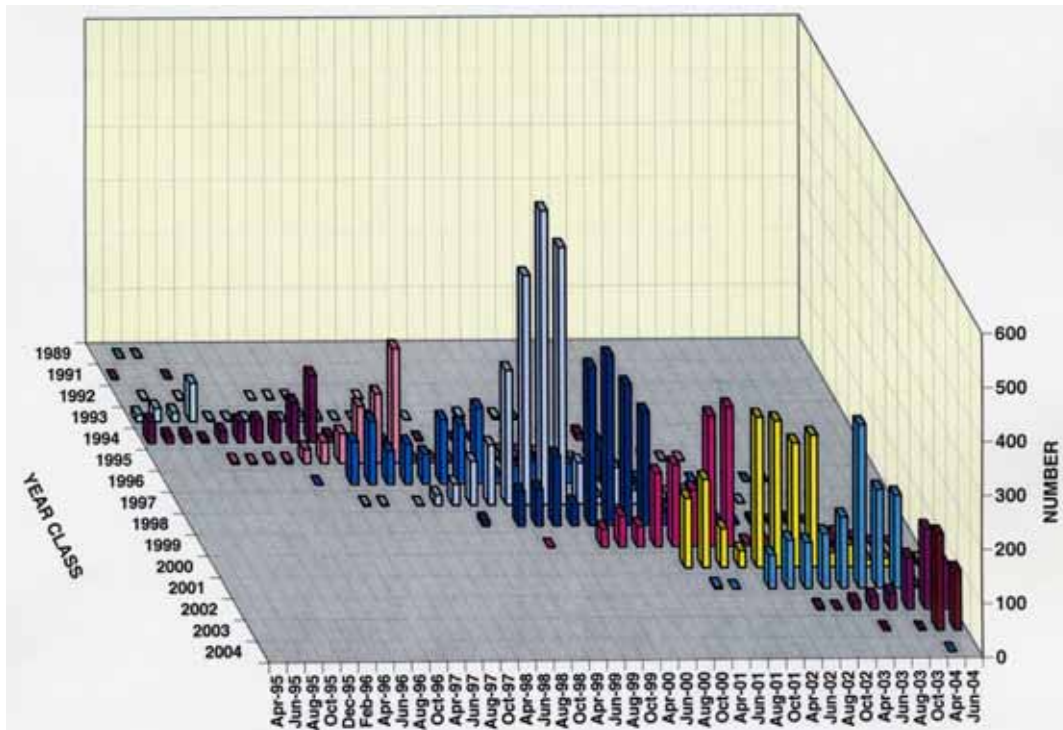
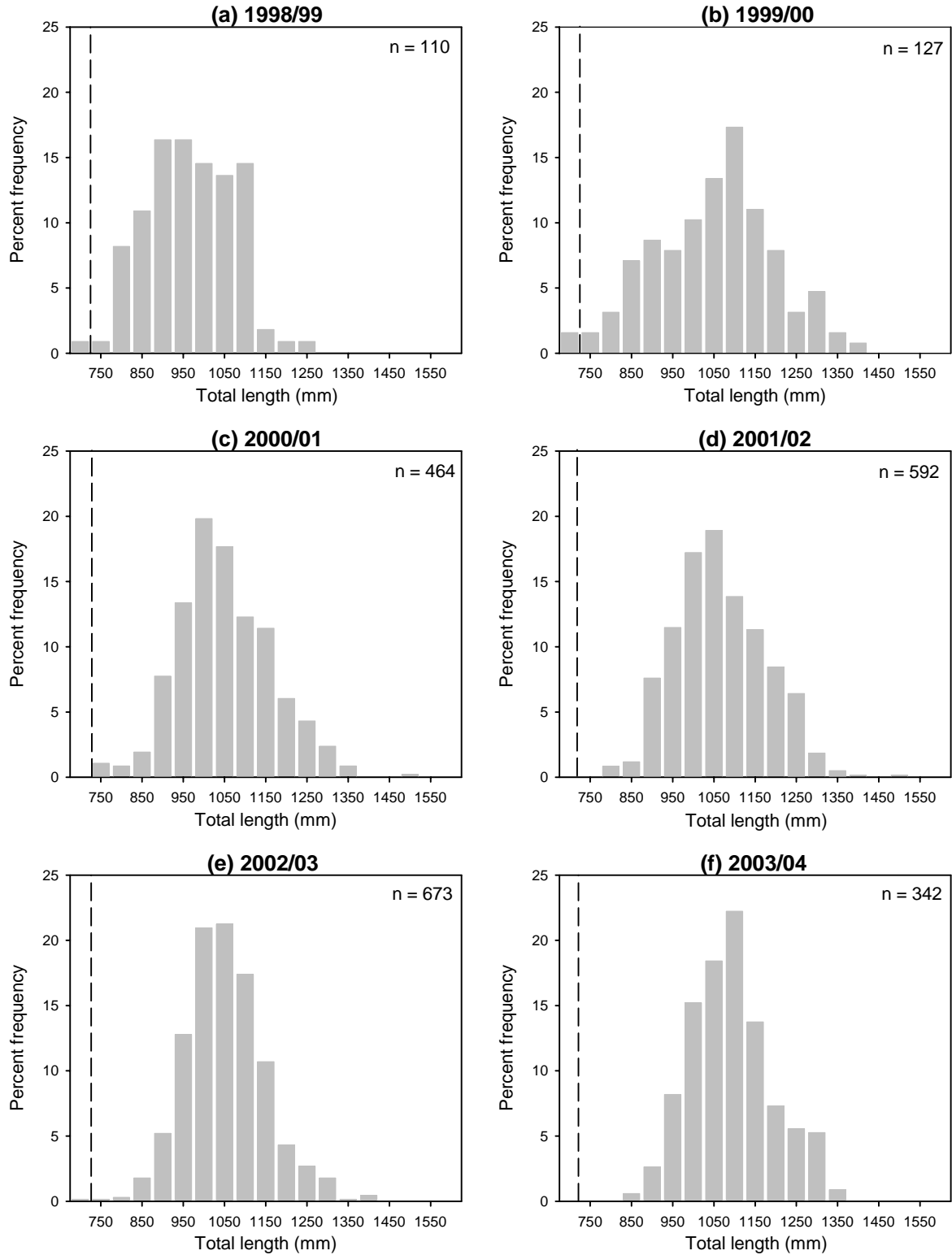


Figure 2. Estimated number of juvenile white seabass by year class in OREHP recruitment surveys, April 1995 - June 2004 (from *Nearshore Gill Net Sampling Program for White Seabass (Age I - IV)*. Allen et al., 2004. 23 pp).

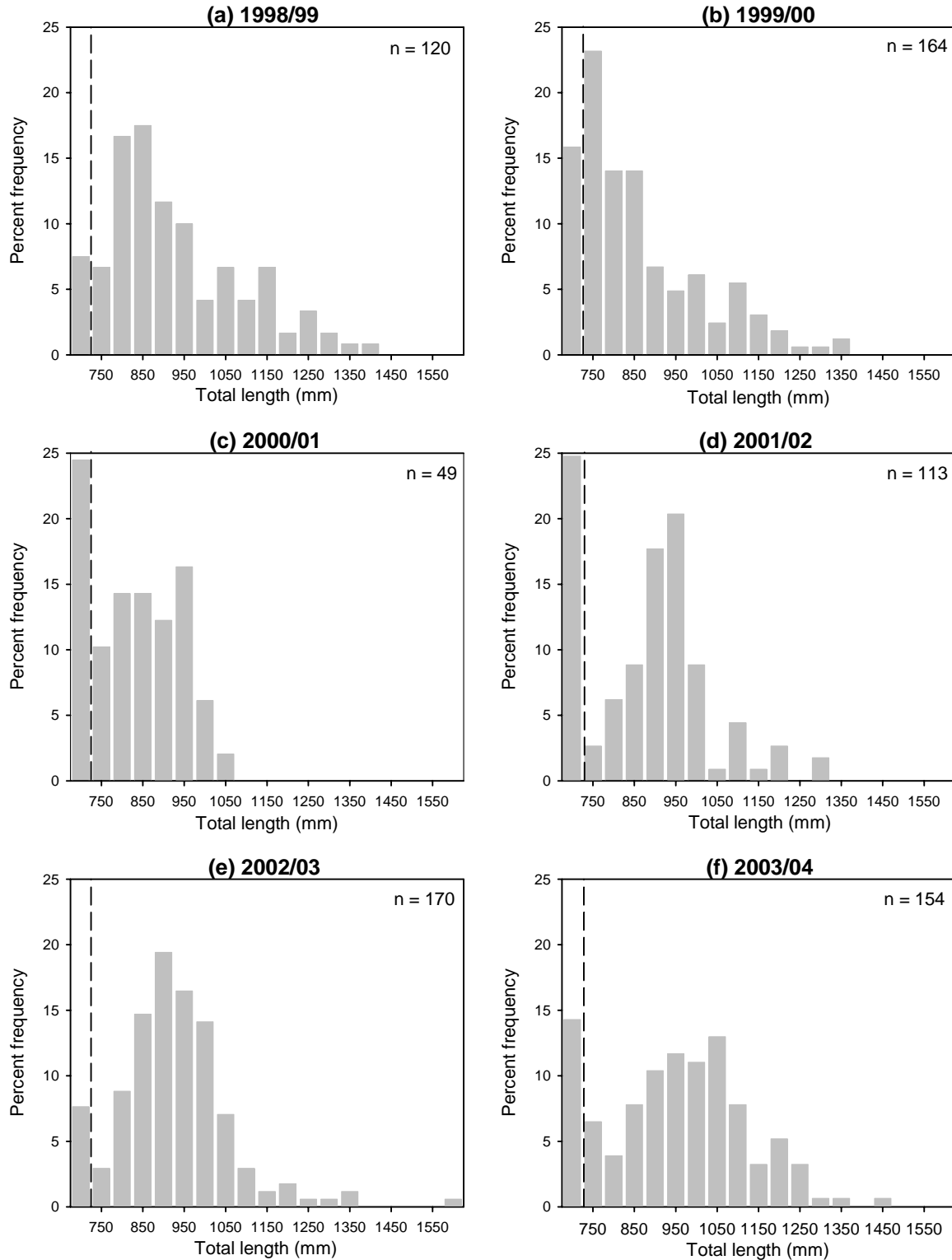
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Note: The dashed line represents the minimum size limit of 711 mm TL (28 in). Source: DFG Market Sampling Program
 All sub-legal fish were grouped together; lengths ranged from 400 - 675 mm TL.

Figure 3. Commercial white seabass length-frequencies, 1998-1999 to 2003-2004.

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Note: The dashed line represents the minimum size limit of 711 mm TL (28 in).
 All sub-legal fish were grouped together; lengths ranged from 100 - 700 mm TL.

Source: RecFIN

Figure 4. Recreational white seabass length-frequencies, 1998-1999 to 2003-2004.

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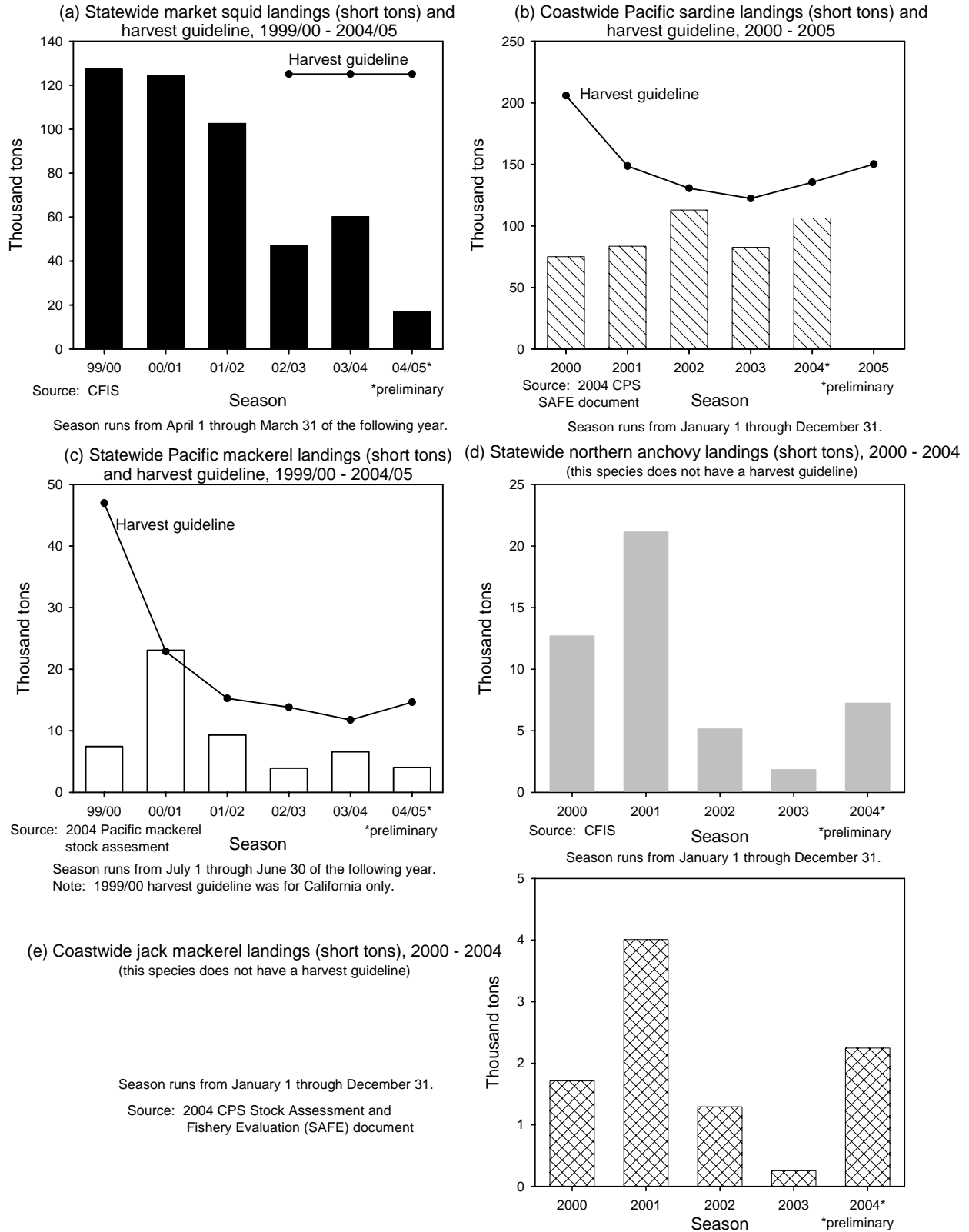


Figure 5. Harvest guidelines and commercial catch of white seabass forage species.

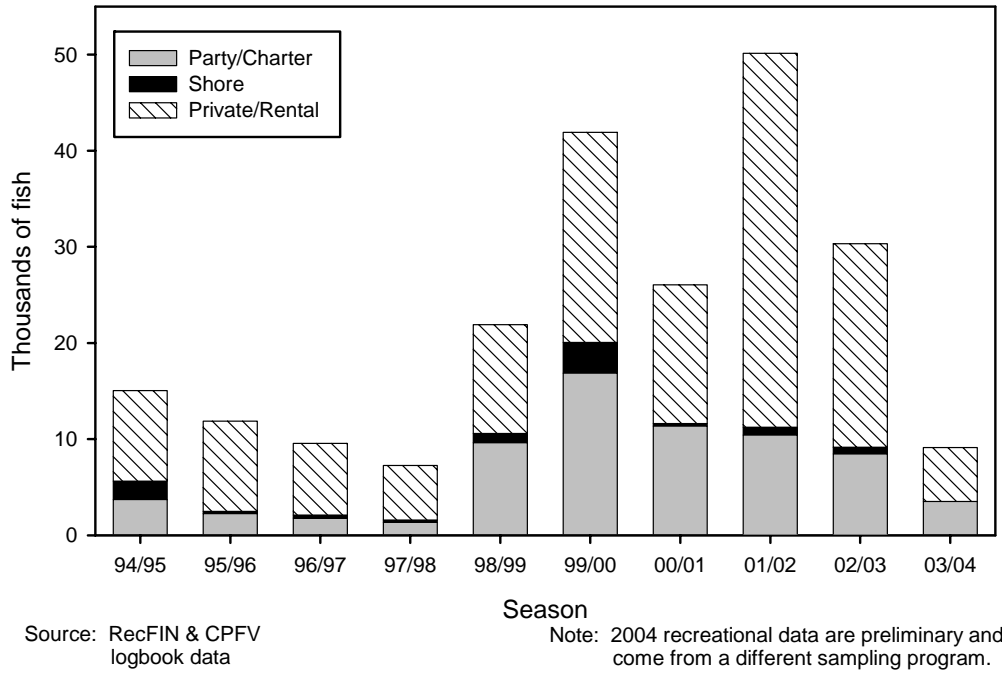


Figure 6. Recreational white seabass catch (number of fish) by fishing mode, 1994-1995 to 2003-2004.

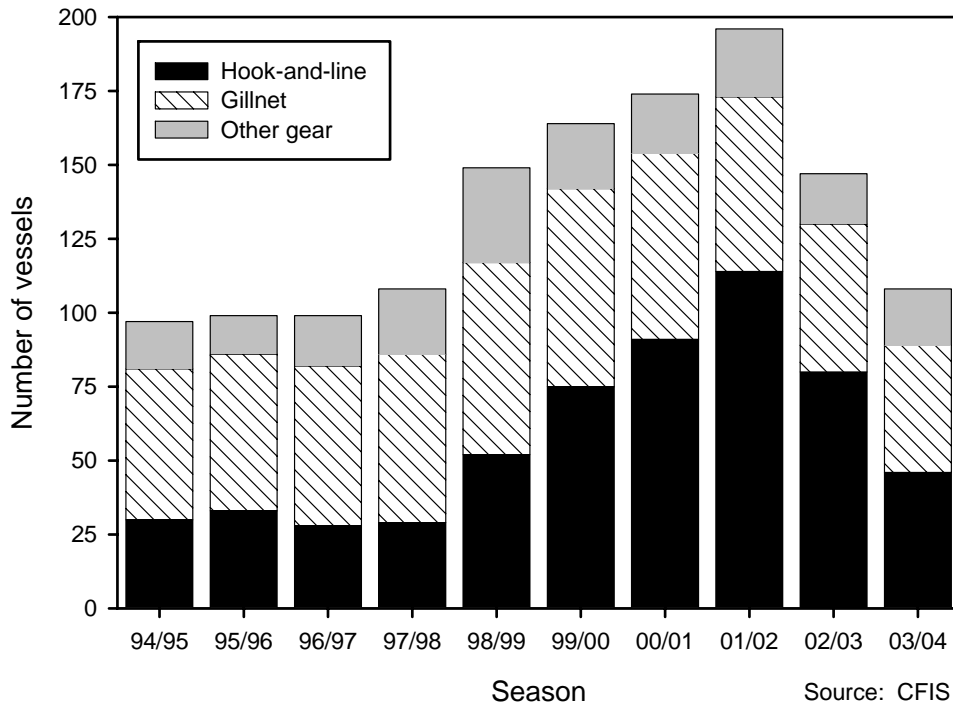


Figure 7. Number of commercial vessels landing white seabass by principal gear, 1994-1995 to 2003-2004.