White Seabass Fishery Management Plan
2004-2005 Annual Review

Prepared by

Department of Fish and Game
Marine Region
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Executive Summary

The White Seabass Fishery Management Plan (WSFMP) was adopted in 2002 by the Fish and Game Commission (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., recreational and commercial 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 proposed changes to management, or to the WSFMP, can be considered by the Commission in accordance with the requirements of the Marine Life Management Act.

The annual review process, that was designed to prevent overfishing and other resource damage, is conducted jointly by the Department and an advisory group using a set of criteria referred to as the "Points of Concern". This approach provides the Commission with a diverse combination of information to determine if management changes are warranted.

Points of Concern:

1. Expectation of optimum yield (OY) being exceeded.
2. Changes in the biological characteristics of white seabass.
3. An overfishing condition exists or is imminent.
4. Significant changes to the availability of a forage species upon which the white seabass depends.
5. New information on the status of white seabass.
6. Errors in data or stock assessment were found.

The Department and advisory committee determined that none of the Points of Concern were met during the review of the 2004-2005 season. Additional social and economic information along with the catch information from Mexico support this conclusion. As a result, the Department does not recommend any changes to the management of white seabass or to the WSFMP at this time.

Background

The White Seabass Scientific and Constituent Advisory Panel (Panel) met with the Department of Fish and Game (Department) in April 2006 to consider if current management measures provide adequate protection for the white seabass resource. The Panel annually reviews current information to evaluate the status of the white seabass resource based on Points of Concern adopted to implement the WSFMP. If a resource conservation issue is found, based on the Points of Concern, the Panel will provide its recommendation, rationale, and analysis to the Department which will recommend to the Commission the appropriate management measure(s) to address the issue(s).

Results

Analysis of the Points of Concern (Table 1) showed that none of the criteria were met in 2004-2005.

Table 1. Analysis of the Points of Concern.

Criteria	Analysis	Result
Total catch is expected to exceed the current harvest guideline or quota.	2004-2005 total catch = 398,584 lbs Optimum Yield = 1.2 million pounds **Below Optimum Yield**	no action necessary
Any adverse or significant change in the biological characteristics of white seabass (age composition, size composition, age at maturity, or age at 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 overfishing condition exists or is imminent.	See analysis in Table 2.	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 and there has been no reduction in harvest guideline or quota for those species actively managed. **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.	Minor adjustments to the recreational and commercial catch estimates were made to correct errors **No significant errors detected**	no action necessary

Point of Concern: Expectation of optimum yield (OY) being exceeded.

The OY is currently set at 1.2 million pounds. At the time of the 2003-2004 review, it was noted that the OY had been exceeded in 2001-2002. However, a subsequent revision of the recreational catch of white seabass in 2001-2002, lowered the total catch below the OY (Appendix A, Figure 1). The 2001-2002 recreational catch had been based on an unusually high private boat catch which was found to be excessive due to incorrect effort estimates.

Point of Concern: Changes in the biological characteristics of white seabass.

A review of the information on white seabass, (age composition, size composition, age at maturity, or age at recruitment), revealed no changes in the biological characteristics for which there is information (size composition) (Appendix A, Figures 2 and 3).

Point of Concern: An overfishing condition exists or is imminent.

Three criteria (Table 2) determine if an overfishing condition exists or is imminent. For the commercial fishery, there must be a twenty 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 304,939 pounds in 2003-2004; a four percent decline compared to the five-season average (316,741 pounds). In 2004-2005 commercial landings totaled 288,358 pounds in 2004-2005; an eleven percent decline compared to the five season average (325,041 pounds). The Panel and the Department agree that although commercial landings have continued to decline, the overfishing criterion was not met in 2004-2005.

For the recreational fishery, the overfishing criteria include a twenty 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 that the commercial fishery results. In the recreational fishery, the number of fish caught in 2003-2004 declined seventy-four percent compared to the previous season (Figure 2). In 2004-2005, the number of fish caught by recreational anglers remained unchanged. However, the average weight of fish caught increased twelve percent in 2003-2004, declining slightly in 2004-2005 (two percent).

The large decrease in the number of recreationally-caught white seabass may be due to different factors. First, the 1997 year class was very strong and these fish recruited to the fishery in 2001-2002, increasing availability and catch. Second, in 2004 the Department started a new sampling program, the California Recreational Fishery Survey (CRFS) to replace the Marine Recreational Fishery Statistical Survey (MRFSS). The CRFS catch estimates appear much lower for most species, including white seabass, than the MRFSS estimates because the method of determining the effort estimate is significantly different. The Panel and the Department agree that while there was a decline in recreational catch in 2003-2004, it was probably not as high as the

originally described (seventy-four percent). Additionally the average weight of fish caught by recreational anglers has not shown the same downward trend as the catch, thus the overfishing criteria were 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.	2004-2005 = 288,358 lbs=**11% decline** five-season average = 325,041 lbs 2003-2004 = 304,939 lbs = **4% decline** five-season average = 316,741 lbs (Figure 1)	no action necessary
A 20 percent decline in both the number of fish and the average weight of white seabass caught in the recreational fishery for the same two consecutive seasons, as determined by the best available data. Source: MRFSS & CRFS survey data.	2004-2005 = 7,879 fish = **1% increase** average weight = 18.7 lbs = **2% decline** 2003-2004 = 7,816 fish = **74% decline** average weight = 19.1 = **12% increase** 2002-2003 = 30,315 fish average weight = 17.1 lbs	no action necessary
A 30 percent decline in recruitment indices for juvenile white seabass compared to prior five-season average of recruitment, as determined by the best available data. Source: OREHP field study data for August, October and June only	2004-2005 = 1,032 fish = **8% decline** five season average = 1,124 fish 2003-2004 = 749 fish = **36% decline** five-season average = 1,177 fish	no action necessary

The final criterion for determining if an overfishing condition exists, is a thirty percent decline in the recruitment index for juvenile white seabass compared to the five season average of recruitment (Figure 3). The Ocean Resources Enhancement and Hatchery Program (OREHP) conducts standardized field studies four times a year (August, October, April and June) for juvenile recruitment. Lack of funding resulted in only three months of sampling during the 2004-2005 season. As a result, this review compared the catch for August, October and June (April was dropped in 2005). The results show an eight percent decline in 2004-2005, compared to the previous five-season average.

After correcting a data error during the review, the 2003-2004 survey results showed a thirty-six percent decline in juvenile recruitment instead of the fourteen percent previously reported. Thus, the juvenile recruitment survey results appeared to have met

the overfishing criterion for the 2003-2004 season. The Panel and the Department considered these revised results during this annual review and believe that there is no need for management action as the juvenile recruitment has remained relatively steady the last five seasons (Appendix A, Figure 4), and even increased in the 2004-2005 season. There was a large one-time catch of juvenile white seabass in 1999-2000 due to a strong 1997 year class. No year classes of that magnitude have been detected since.

Other Points of Concern:

The remaining three Points of Concern (Table 1) consider changes to the availability of a forage species upon which the white seabass depends, any new information on the status of white seabass, and if any errors in data or stock assessment were found. A review of white seabass forage species (Appendix A, Figure 5) revealed no changes in availability, there is no new information on stock status, and there were no significant errors found in the data.

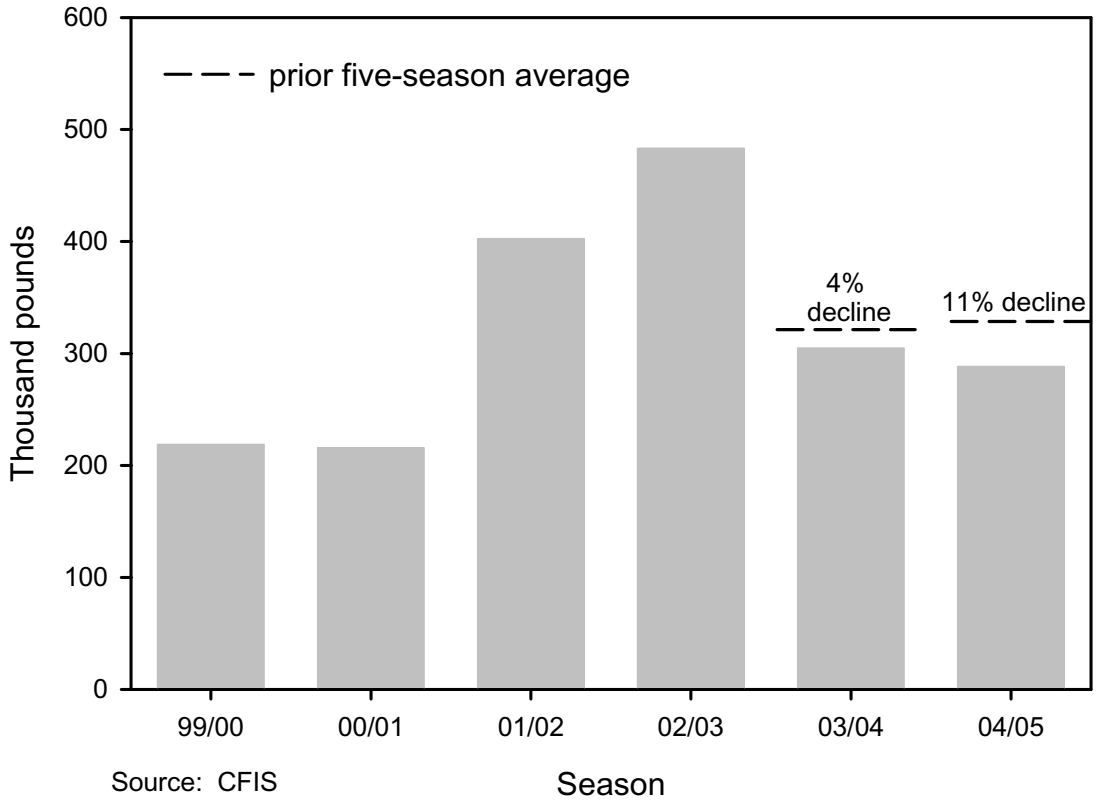


Figure 1. Trends in commercial white seabass landings, 1999-2000 to 2004-2005.

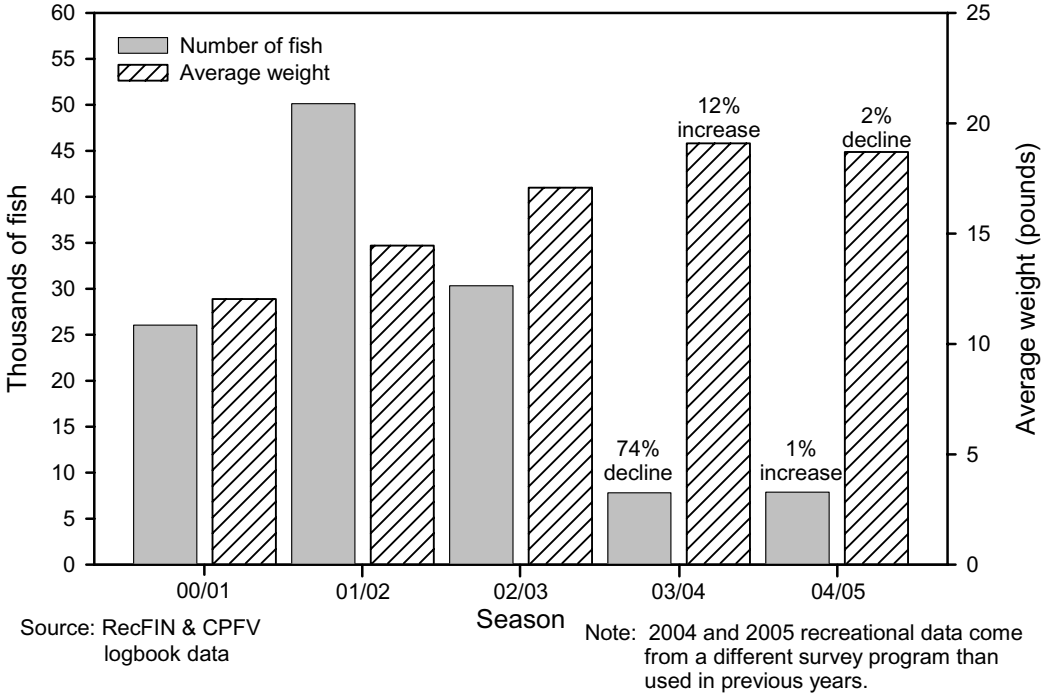


Figure 2. Trends in the recreational white seabass catch, 2000-2001 to 2004-2005.

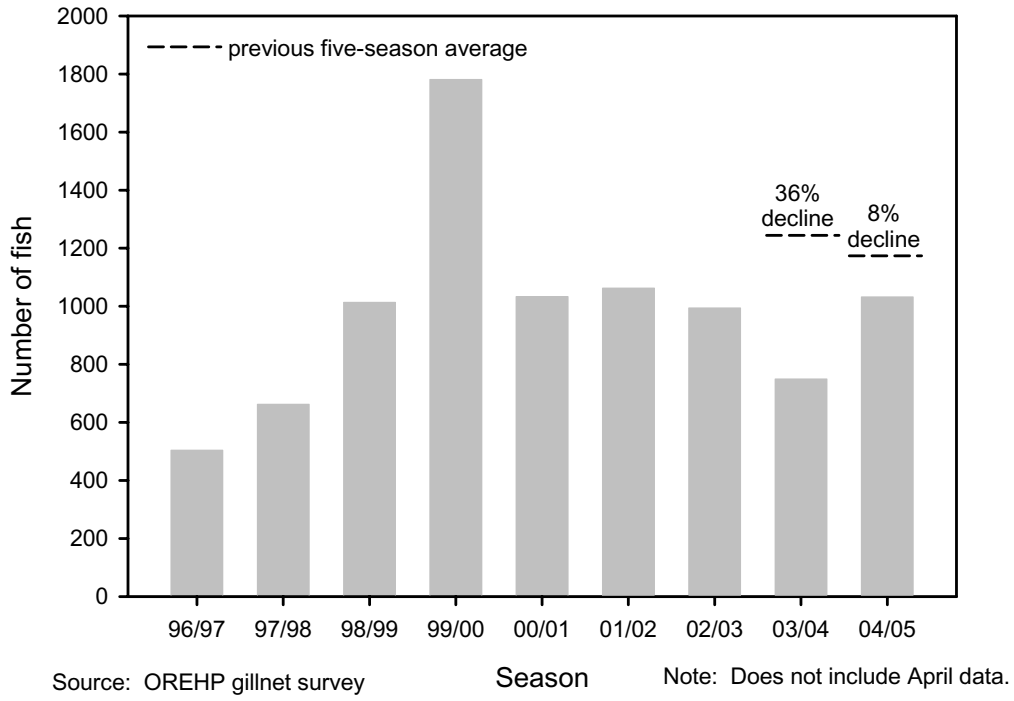


Figure 3. Trends in juvenile white seabass recruitment, 1996-1997 to 2004-2005.

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 steady (Appendix A, Figure 6). 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 eleven years, ranging from $0.01 to $9.00 per pound. No similar social or economic data are available for the recreational fleet.

Information about the take of white seabass in Mexican waters was considered by the Panel. California commercial fishermen have not been allowed to fish in Mexican waters since 1982, so there are no reported commercial landings of white seabass in the Department's database. Recreational fishermen are allowed to fish in Mexican waters with a Mexican fishing license. The Commercial Passenger Fishing Vessel (CPFV) logbook data show a slight decrease in the number of white seabass caught by California fishermen in Mexico from 144 fish in 2003-2004 to 114 fish in 2004-2005. No additional information about either the recreational or commercial catch of white seabass in Mexico is available.

Appendix A – Data Analyses

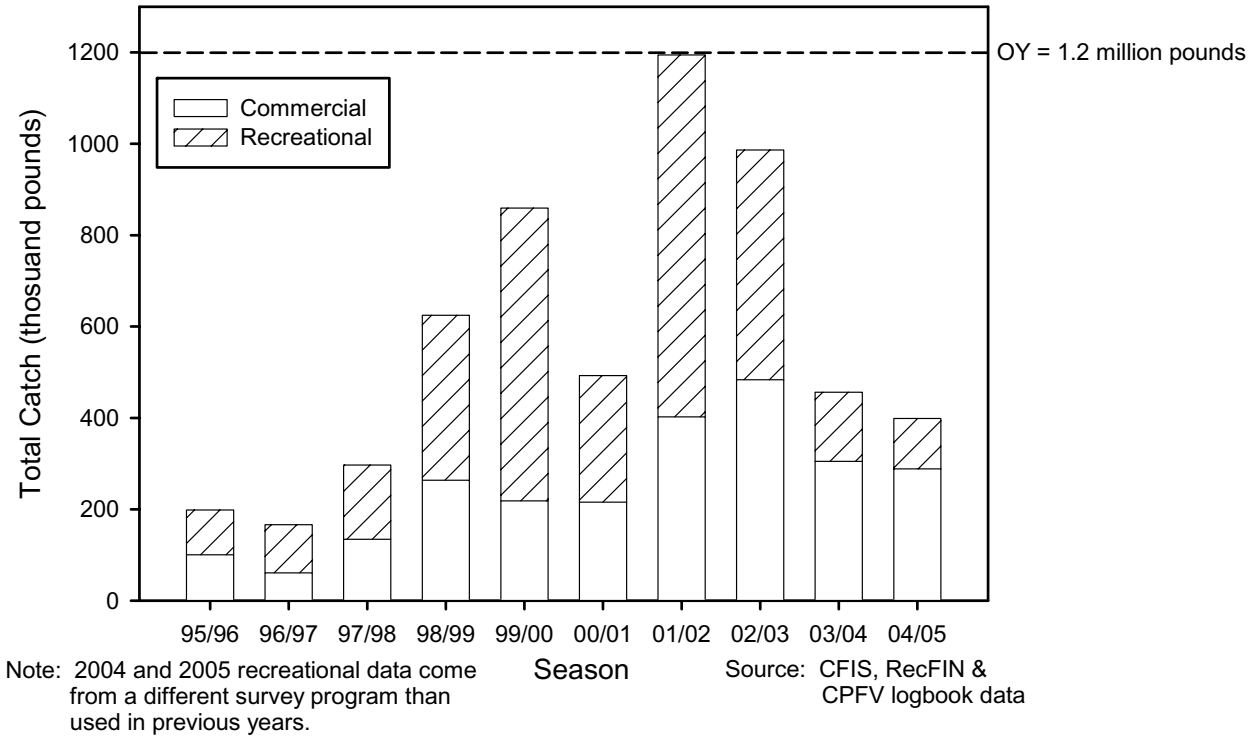
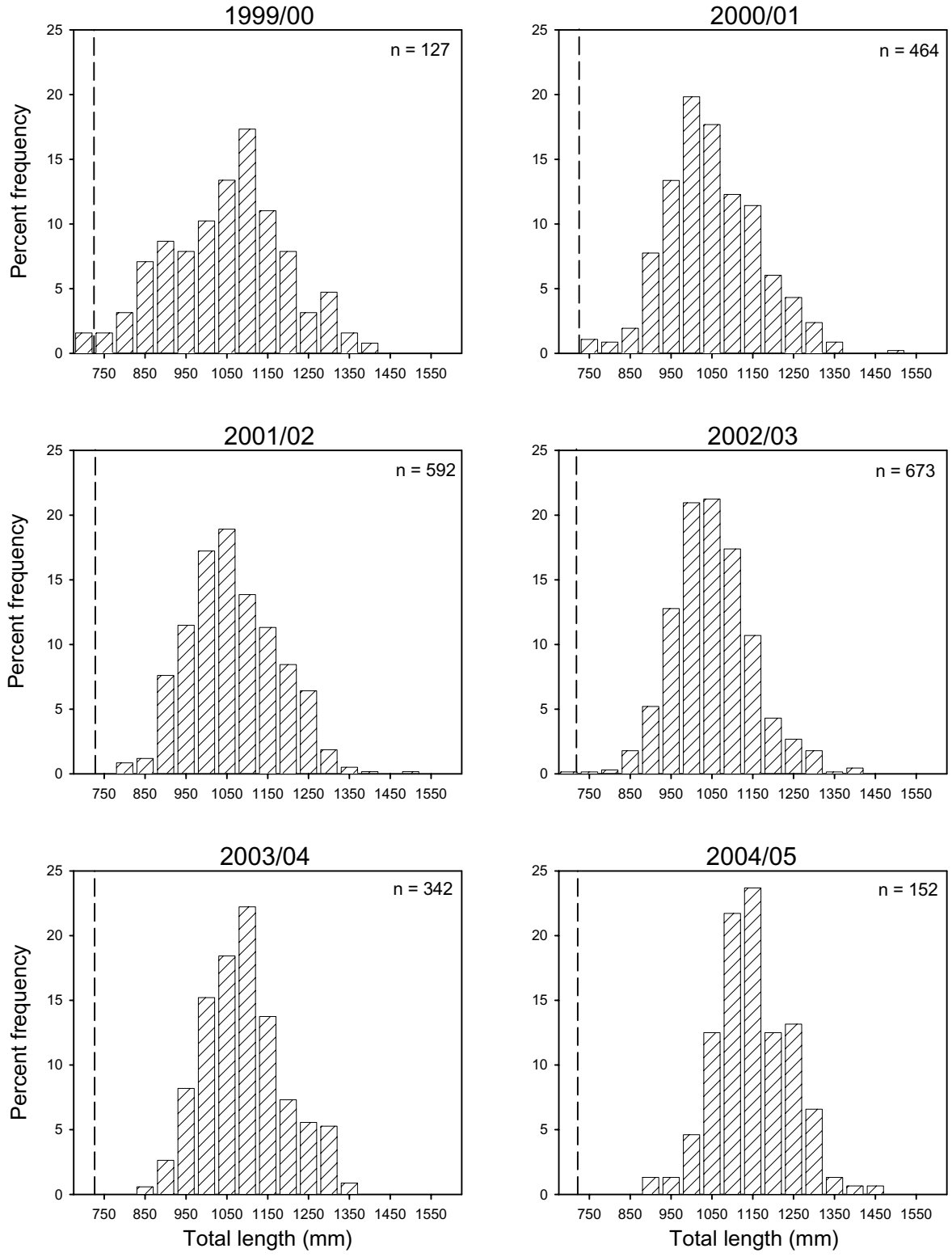
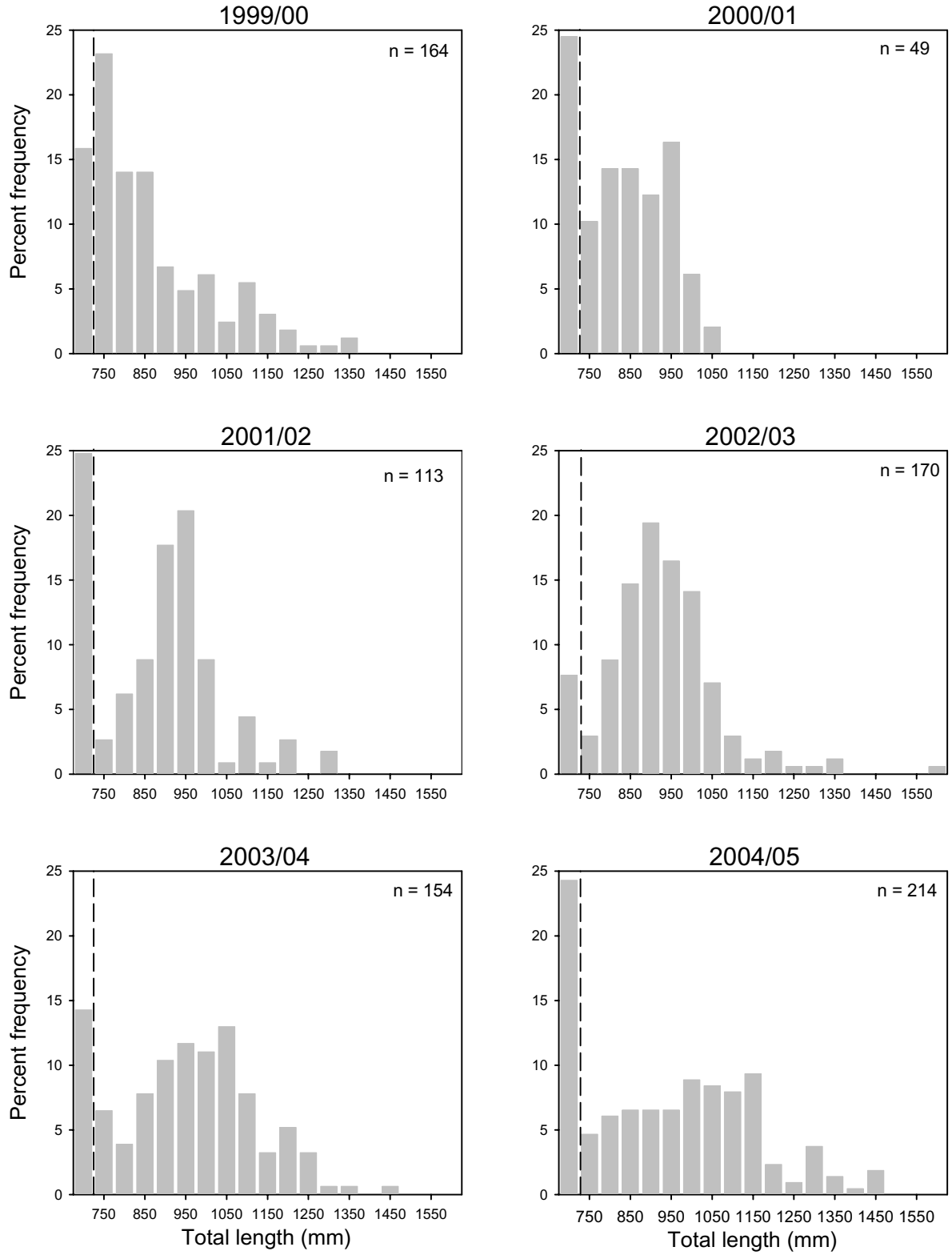


Figure 1. Total catch of white seabass, 1995-1996 to 2004-2005.



Source: Department market sampling program
Note: The dashed line represents the minimum size limit of 28 inches (711 mm).

Figure 2. Commercial white seabass length-frequencies, 1999-2000 to 2004-2005.



Source: RecFIN
Note: The dashed line represents the minimum size limit of 28 inches (711 mm).

Figure 3. Recreational white seabass length-frequencies, 1999-2000 to 2004-2005.

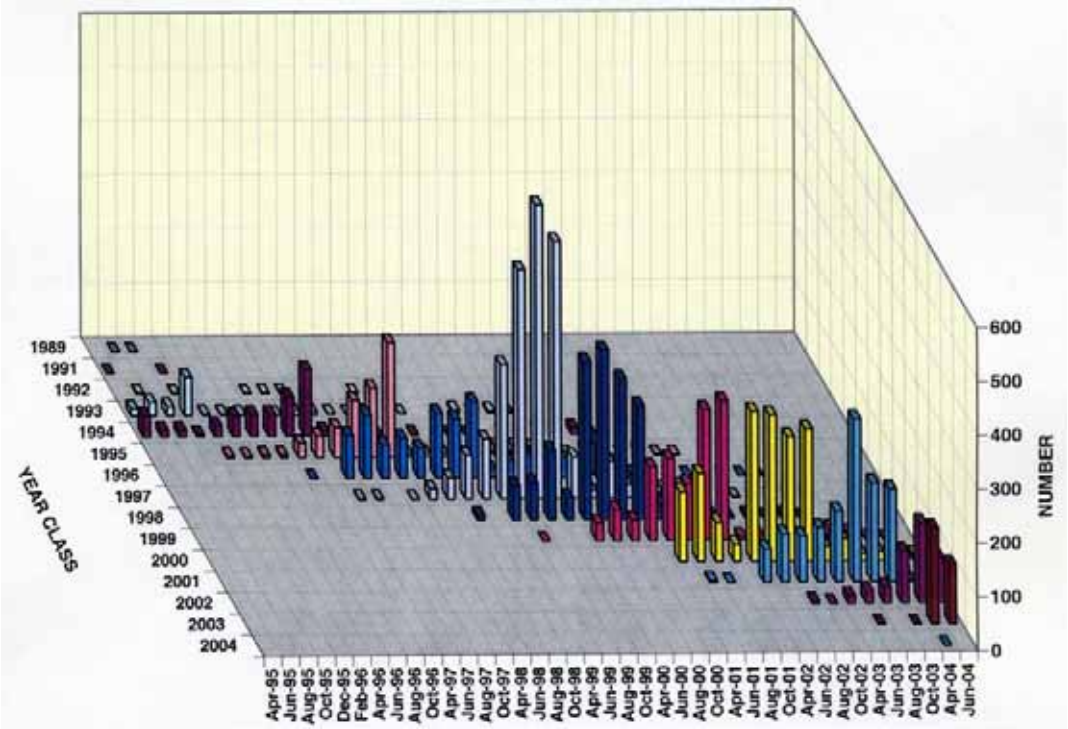


Figure 4. Estimated number of juvenile white seabass by year class in OREHP recruitment surveys, April 1995 - June 2004 (from Allen et al. 2004. Nearshore Gill Net Sampling Program for White Seabass (Age I - IV) Field Sampling Annual Report for FY 2002-2004. 23 pp).

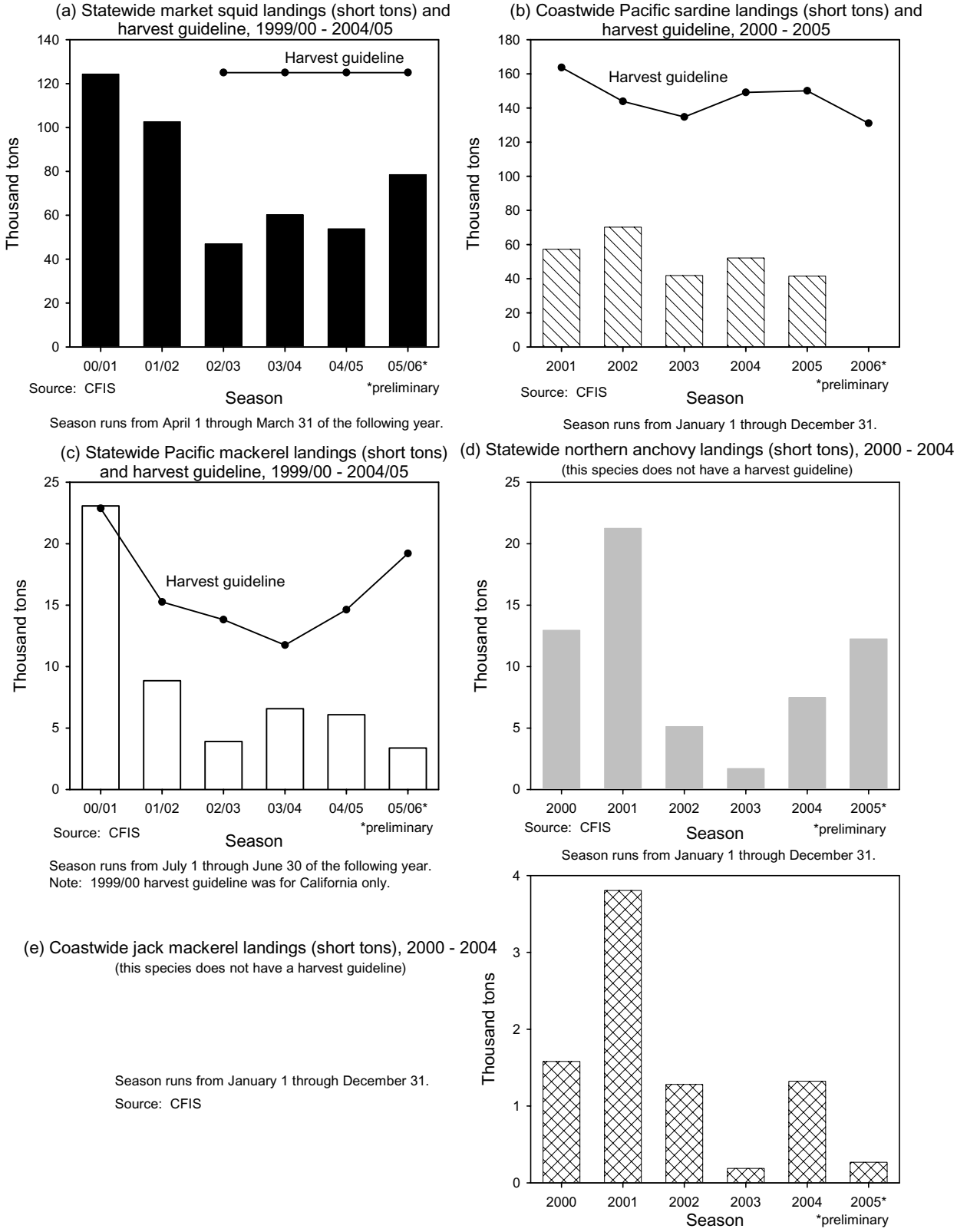


Figure 5. Harvest guidelines and commercial catch of white seabass forage species.

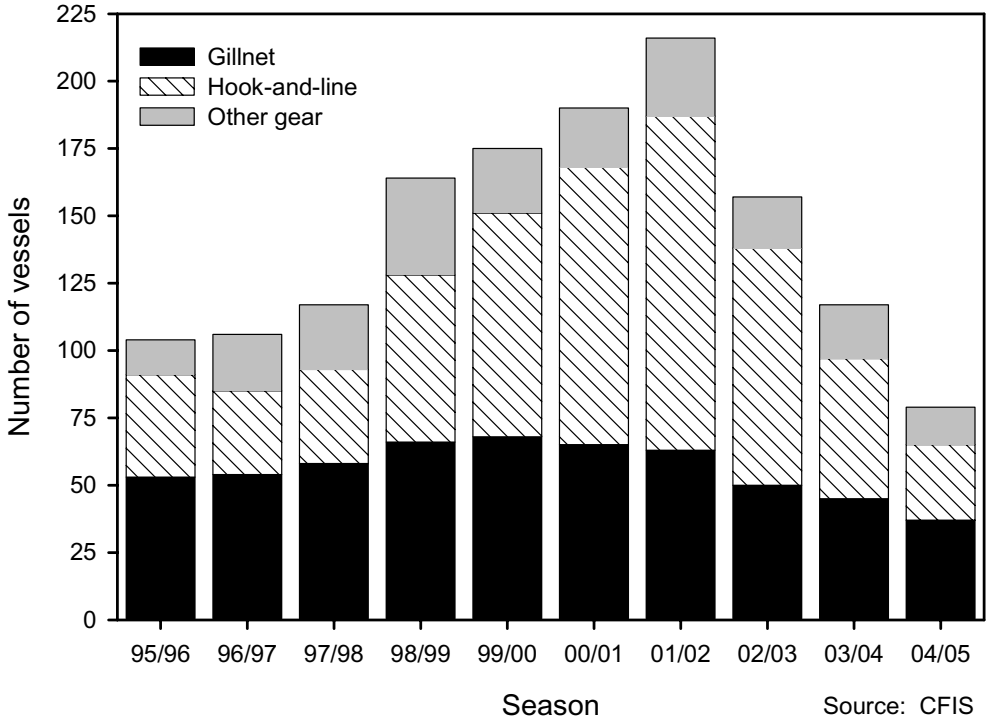


Figure 6. Number of commercial vessels landings white seabass by gear, 1995-1996 to 2004-2005.