

**White Seabass Fishery Management Plan
2007-2008 Annual Review**



Prepared by

Department of Fish and Game
Marine Region
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White Seabass Fishery Management Plan 2007-2008 Annual Review

Executive Summary

The California Fish and Game Commission (Commission) adopted the White Seabass Fishery Management Plan (WSFMP) in June 2002. The WSFMP includes a provision for annual monitoring and assessment of the white seabass fisheries. The White Seabass Scientific and Constituent Advisory Panel (WSSCAP) was established to assist the Department of Fish and Game (Department) and the Commission with the review of the fishery assessments, management proposals, and plan amendments. The annual review includes fishery-dependent data (e.g., commercial and recreational landings and length frequencies), and fishery-independent data (e.g., recruitment information), as well as documented changes within the social and economic structure of the recreational and commercial industries that utilize the white seabass resource within California. The review also includes information on the harvest of white seabass from Mexican waters and other relevant data. Based on the results of the annual review, in cooperation with the WSSCAP, the Department will provide management recommendations, if needed, to the Commission.

To assist the Commission in determining if management measures need to be modified or added, the WSFMP framework includes, and the Commission adopted, points of concern criteria to help determine when management measures are needed to address resource issues. The points of concern are:

1. catch is expected to exceed the current harvest guideline or quota;
2. any adverse or significant change in the biological characteristics of white seabass (age composition, size composition, age at maturity or recruitment) is discovered;
3. an overfishing condition exists or is imminent;
4. any adverse or significant change in the availability of white seabass forage or in the status of a dependent species is discovered;
5. new information on the status of white seabass is discovered;
6. an error in data or stock assessment is detected that significantly changes estimates of impacts due to current management.

The Department and WSSCAP met on April 27, 2009 to review the 2007-2008 fishery season (September 1 to August 31), and together agreed that none of the points of concern were met. 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 WSSCAP annually reviews current information to evaluate the status of the white seabass resource based on points of concern adopted to implement the WSFMP, and to consider whether current management measures provide adequate protection to the resource. If a resource conservation issue is found, based on the points of concern, the WSSCAP will provide its recommendation, rationale, and analysis to the Department, which will recommend to the California Fish and Game Commission (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 2007-2008.

Table 1. Analysis of the points of concern.

| Criteria | Analysis | Result |
|---|---|---------------------|
| Catch is expected to exceed the current harvest guideline or quota. | 2007-2008 total catch = 763,759 pounds; Optimum Yield = 1.2 million pounds; Total catch is 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 recruitment) is discovered. | Recreational and commercial fishery length-frequencies showed no significant change that would indicate a problem in the fishery. No new information on age composition, age at maturity, or age at recruitment. | No action necessary |
| An overfishing condition exists or is imminent. | See analysis in Table 2. No overall overfishing condition noted. | No action necessary |
| Any adverse or significant change in the availability of white seabass forage or in the status of a dependent species is discovered. | Forage species landings are fairly stable. | 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 improve estimates. No significant errors detected. | No action necessary |

Point of Concern: Expectation of optimum yield being exceeded.

The Commission established a fishing season of September 1 through August 31 of the following year. The Commission also adopted an optimum yield. The optimum yield is based on a maximum sustainable yield proxy of the unfished biomass, and is currently

set at 1.2 million pounds. In the 2007-08 season, the total recreational and commercial harvest was 763,759 pounds, 64 percent of the allowable catch (Appendix A, Table 1).

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

An analysis of the commercial and recreational fisheries length frequencies for the past six seasons (Appendix A, Figures 1 and 2) shows that a higher percentage of smaller fish were caught in the 2007/08 season when compared to the previous season. An increase in landings in the commercial fishery combined with a shift in length distribution to smaller fish is generally indicative of a relatively strong year class recruiting into the fishery, and does not necessarily indicate a problem. Recreational landings were similar to that of 2006/07 and, coupled with length data, indicate a downward shift in size distribution but not a decrease in abundance.

Sampling of the commercial fishery for length data was greatly improved for the 2007/08 season due to the hiring of a dedicated person assigned to collect this data. More than six times as many fish were measured in 2007/08 compared with 2006/07.

In the recreational fishery the occurrence of landed white seabass under the minimum legal size limit of 28 inches continues to be a problem. The Department is currently developing a plan to increase public outreach to better educate anglers about correct identification of white seabass and the existence of the minimum legal size limit.

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

Three criteria (Table 2), all of which must be met to establish a point of concern, determine if an overfishing condition exists or is imminent. For the commercial fishery, there must be a 20 percent decline in landings in each of 2 consecutive seasons compared to the prior 5-season running average. Commercial landings of white seabass (Appendix A, Table 2) totaled 653,086 pounds in 2007-2008; this is a 73 percent increase when compared to the prior 5-season running average (378,052 pounds). In 2006-2007 commercial landings totaled 421,388 pounds; this is a 13 percent increase compared to the prior 5-season running average (374,281 pounds). The WSSCAP and the Department agree that the overfishing criterion for the commercial fishery was not met.

For the recreational fishery, the overfishing criterion is defined as a 20 percent decline in each of 2 consecutive seasons for both the number of fish and the average weight (Appendix A, Table 3). In the recreational fishery, the number of fish caught in 2007-2008 remained basically the same when compared to the previous season. The average weight of fish caught in the 2007-2008 season decreased 17 percent when compared to the previous season. The threshold of a 20 percent decline was not met for either of the two recreational fishery criteria during 2007-2008. The WSSCAP and the Department agree that the overfishing criterion for the recreational fishery was not met.

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 prior 5-season running average of recruitment (Appendix A, Table 4). The Ocean Resources Enhancement and Hatchery Program has routinely conducted standardized field studies four times a year (August, October, April and June) for juvenile recruitment, but lack of funding resulted in reduced sampling during the last three seasons. Consequently, only data from the October field work were available for this review. The results show a 52 percent decrease in recruitment for the 2007-2008 season, compared to the previous 5-season average. In 2006/07, there was a 28 percent decrease in the October catch compared to the previous 5-season average.

The October 2007-2008 recruitment index of 157 is the lowest in the 10-year history of the program. Based on fishery-independent recruitment surveys, the WSSCAP and the Department agree that the juvenile recruitment overfishing criterion was met because there was more than a 30 percent decline in recruitment for the current season. Based on the analysis of all three overfishing criteria, the WSSCAP and the Department agree that the overall overfishing criterion for the fishery was not met.

Table 2. Analysis to determine if the white seabass resource is overfished (Criteria taken from California Code of Regulations, Title 14).

| Criteria | Analysis | Result |
|---|--|-------------------|
| A 20 percent decline in the total annual commercial landings of white seabass for the past 2 consecutive seasons compared to the prior 5-season running average of landings, based on landing receipt data. | 2007-2008 653,086 pounds = 73% increase 5-season average = 378,052 pounds 2006-2007 421,388 pounds = 13% increase 5-season average = 374,281 pounds | Criterion not met |
| 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 2 consecutive seasons, as determined by the best available data. | 2007-2008 7,064 fish = 0% change 18.3 pound average = 17% decrease 2006-2007 7,090 fish = 34% decrease 21.4 pound average = 19% increase | Criterion not met |
| A 30 percent decline in recruitment indices for juvenile white seabass compared to prior 5-season running average of recruitment, as determined by the best available data. | 2007-2008 157 fish = 52% decrease 5-season average = 325 fish 2006-2007 244 fish = 28% decrease 5-season average = 340 fish | Criterion met |

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 any errors in data or stock assessment which were found. A review of white seabass forage species (Appendix A, Figure 3) revealed no changes in availability. There is no new information on stock status and there were no significant errors found in the data.

Additional Information

The Department summarized some basic social and economic information for the commercial fishery, and provided those summaries to the WSSCAP (Appendix A, Table 5). The number of commercial vessels landing white seabass has varied over time. In the 2007-2008 season, the number of vessels declined slightly. The most common ex-vessel value (price per pound) for white seabass remained steady at \$2.25-\$2.50 per pound for the 7 seasons ending in 2004-05, then increased to \$3.00 per pound in the last 2 seasons and \$3.50 for the 2007-2008 season. 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 WSSCAP. California commercial fishermen are prohibited by Mexican law to fish in the territorial seas of Mexico, and no landings of white seabass from Mexico by California commercial fishermen were reported in 2007-2008. Recreational anglers may fish in Mexico under the authority of a Mexican sport fishing license. During the 2007-2008 season, Commercial Passenger Fishing Vessel log book data reported 110 white seabass taken in Mexico, down from the 213 reported taken in the prior season. No additional information about either the recreational or commercial catch of white seabass in Mexico is available.

Appendix A – Data Analyses

| Season | Recreational | Commercial | Total |
|--|--------------|------------|-----------|
| 1998/99 | 386,357 | 263,439 | 649,796 |
| 1999/00 | 740,040 | 218,842 | 958,882 |
| 2000/01 | 268,014 | 215,692 | 483,706 |
| 2001/02 | 775,244 | 402,537 | 1,177,781 |
| 2002/03 | 482,013 | 483,410 | 965,423 |
| Values above and below are not comparable due to different survey methods | | | |
| 2003/04 | 157,689 | 305,688 | 463,377 |
| 2004/05 | 128,989 | 288,547 | 417,536 |
| 2005/06 | 188,108 | 391,225 | 579,333 |
| 2006/07 | 112,463 | 421,388 | 533,851 |
| 2007/08 | 110,670 | 653,086 | 763,756 |

Source: Marine Recreational Fisheries Statistics Survey, California Recreational Fisheries Survey, and Commercial Fisheries Information System (includes CPFV logbook data)

Note: 2003/04 – 2007/08 recreational data are from a different survey program than used in previous years

| Season | Pounds Landed | Prior 5-season average | Percent change from previous 5-season average |
|---------|---------------|------------------------|---|
| 1998/99 | 263,460 | | |
| 1999/00 | 218,819 | | |
| 2000/01 | 215,692 | 155,563 | 39% |
| 2001/02 | 402,538 | 178,576 | 125% |
| 2002/03 | 483,410 | 246,963 | 96% |
| 2003/04 | 305,688 | 316,784 | -4% |
| 2004/05 | 288,546 | 325,229 | -11% |
| 2005/06 | 391,224 | 339,175 | 15% |
| 2006/07 | 421,388 | 374,281 | 13% |
| 2007/08 | 653,086 | 378,052 | 73% |

Source: Commercial Fisheries Information System

| Season | Total number of fish caught | Percent change in number of fish from prior season | Average weight in pounds | Percent change in weight from prior season |
|--|-----------------------------|--|--------------------------|--|
| 1998/99 | 21,949 | | 18.1 | |
| 1999/00 | 41,917 | 91 | 13.9 | -30 |
| 2000/01 | 26,054 | -38 | 12.1 | -15 |
| 2001/02 | 50,149 | 92 | 14.3 | 15 |
| 2002/03 | 30,328 | -40 | 17.0 | 16 |
| Values above and below are not comparable due to different survey methods | | | | |
| 2003/04 | 8,617 | N/A | 19.2 | 11 |
| 2004/05 | 8,060 | -6 | 18.7 | -2 |
| 2005/06 | 10,837 | 34 | 17.4 | -8 |
| 2006/07 | 7,090 | -34 | 21.4 | 19 |
| 2007/08 | 7,064 | 0 | 18.3 | -17 |

Source: Marine Recreational Fisheries Statistics Survey, California Recreational Fisheries Survey, and Commercial Fisheries Information System (includes CPFV logbook data)

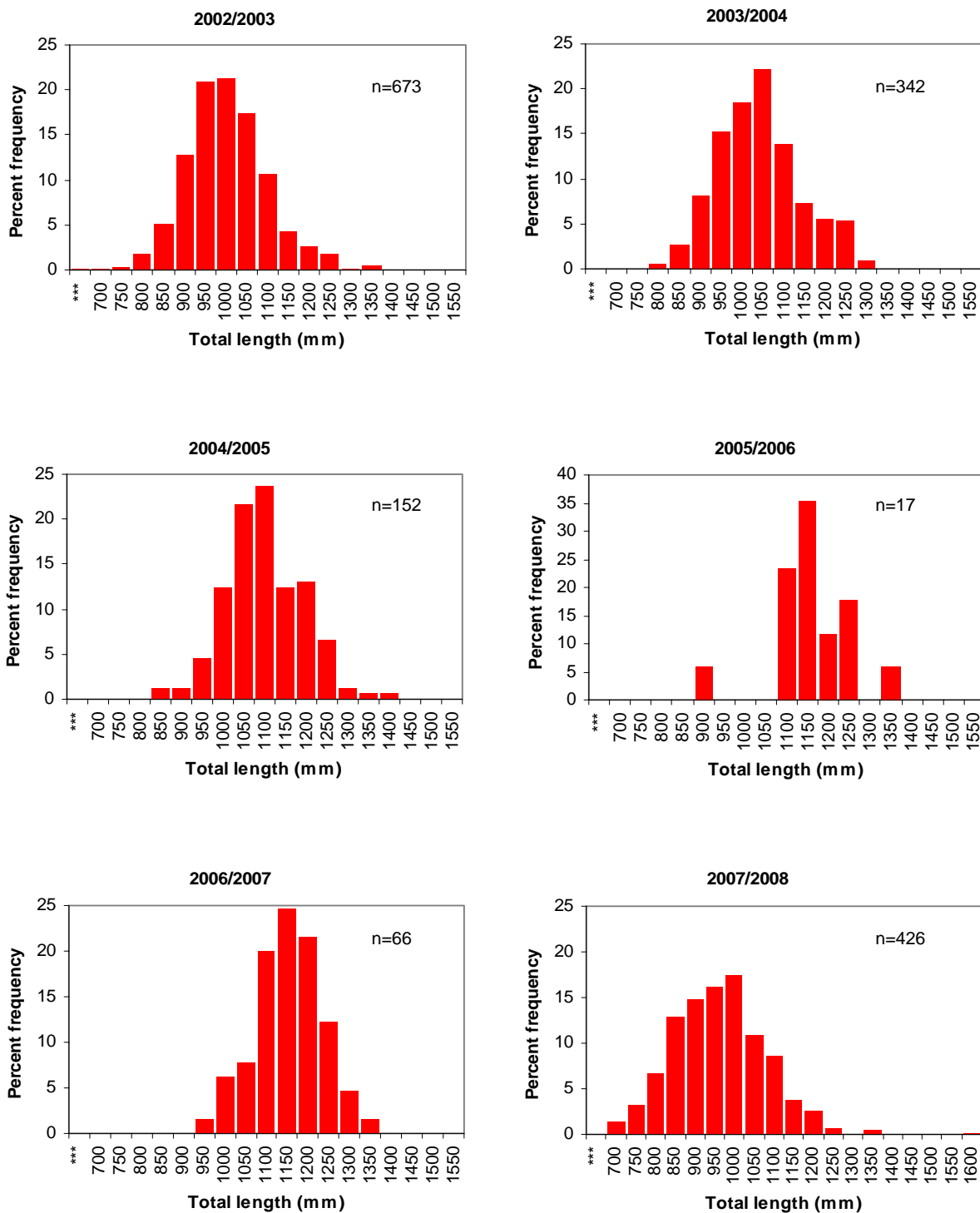
Note: 2003/04 – 2007/08 recreational data are from a different survey program than used in previous years

| Season | October | Previous 5-season average | Percent change from 5-season average |
|---------|---------|---------------------------|--------------------------------------|
| 1998/99 | 259 | | |
| 1999/00 | 580 | | |
| 2000/01 | 402 | | |
| 2001/02 | 323 | 342 | -6% |
| 2002/03 | 274 | 372 | -26% |
| 2003/04 | 287 | 368 | -22% |
| 2004/05 | 423 | 373 | 13% |
| 2005/06 | 395 | 342 | 15% |
| 2006/07 | 244 | 340 | -28% |
| 2007/08 | 157 | 325 | -52% |

Source: Ocean Resources Enhancement and Hatchery Program gill net surveys

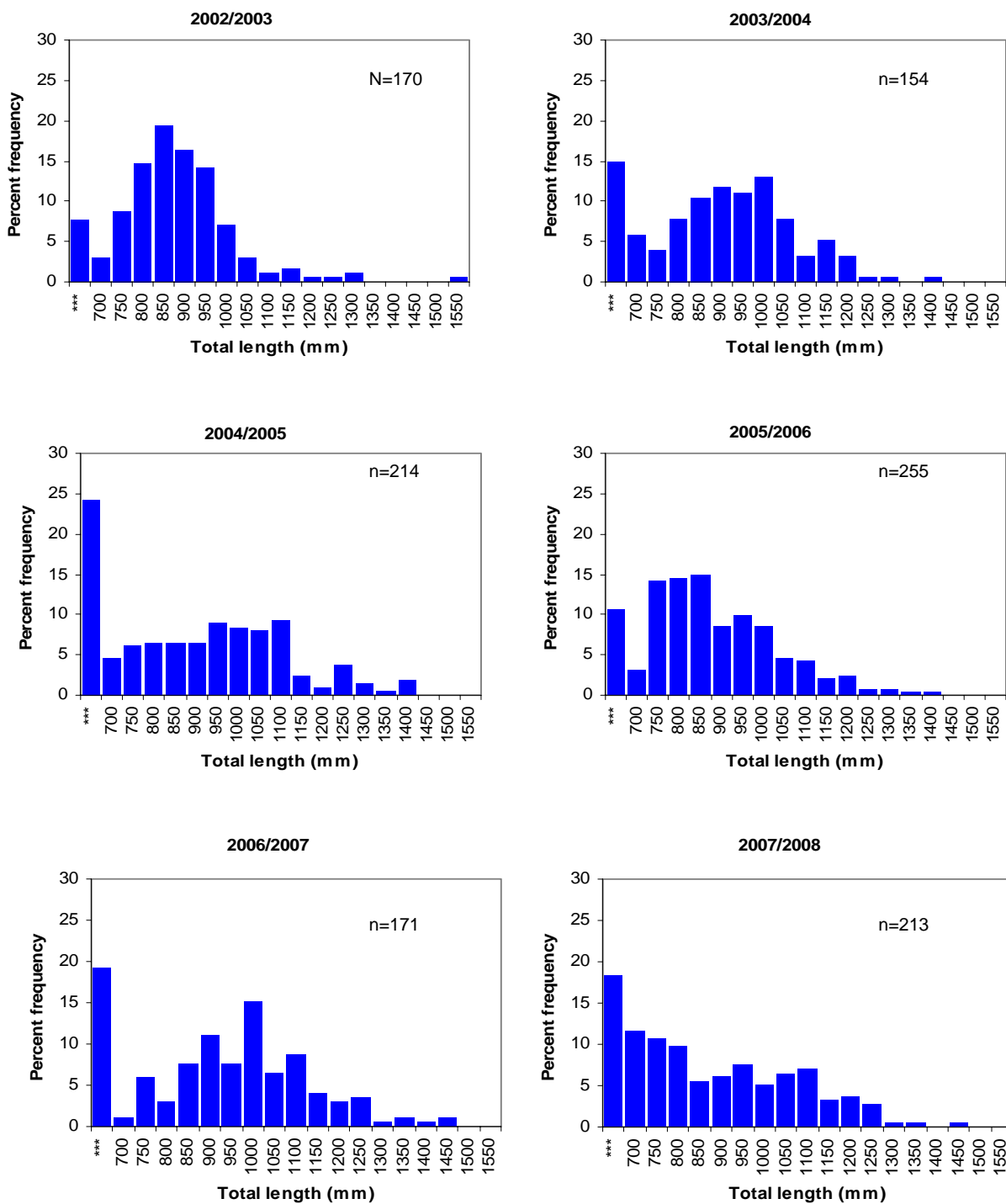
| Season | Total number of vessels landing white seabass | Most common ex-vessel price per pound |
|---------|---|---------------------------------------|
| 1998/99 | 164 | \$2.50 |
| 1999/00 | 175 | \$2.50 |
| 2000/01 | 190 | \$2.50 |
| 2001/02 | 216 | \$2.25 |
| 2002/03 | 157 | \$2.50 |
| 2003/04 | 117 | \$2.50 |
| 2004/05 | 80 | \$2.50 |
| 2005/06 | 96 | \$3.00 |
| 2006/07 | 98 | \$3.00 |
| 2007/08 | 96 | \$3.50 |

Source: Commercial Fisheries Information System



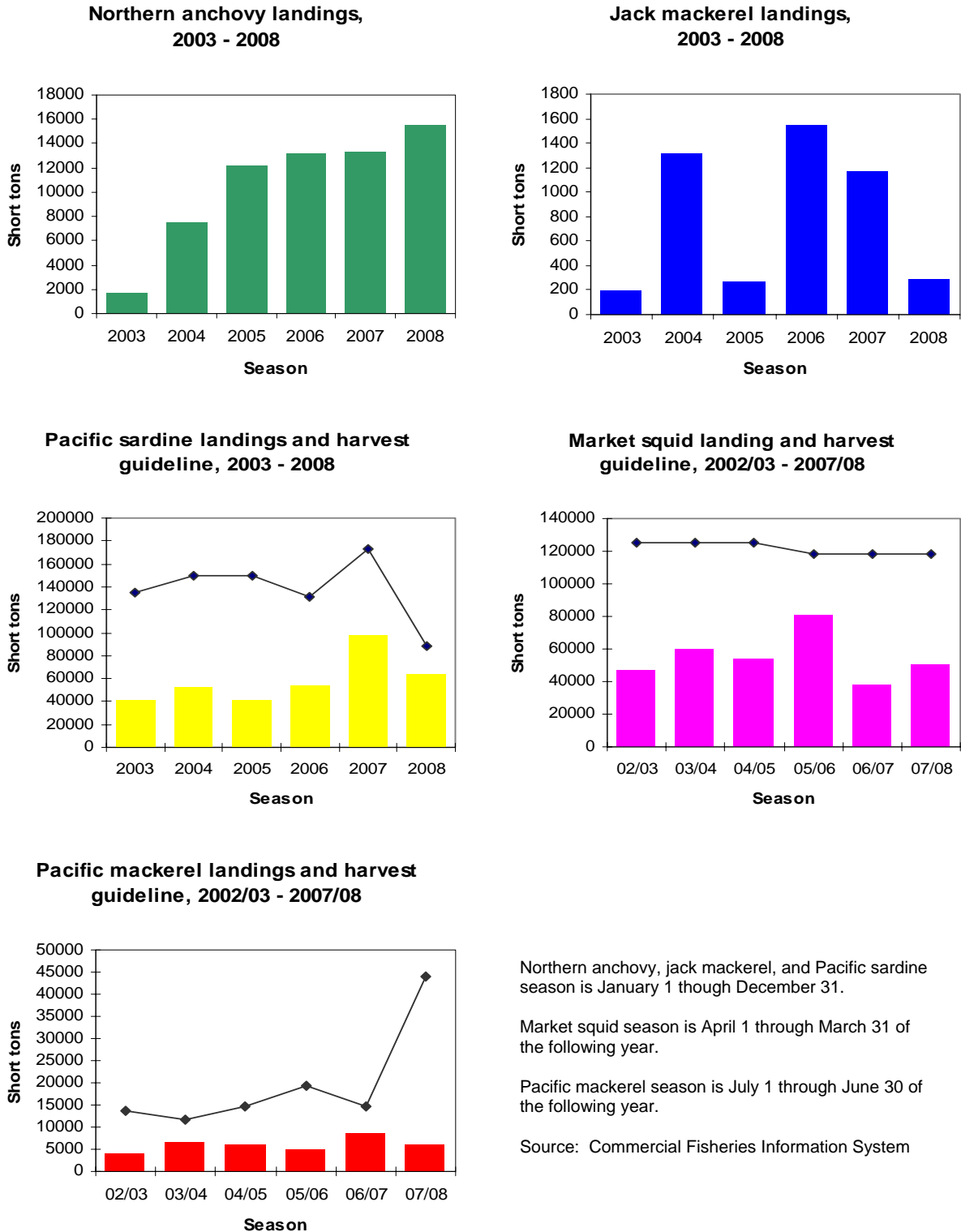
***all sub-legal fish were grouped together
 Source: Department of Fish and Game Market Sampling Program

Figure 1. Commercial white seabass sampled length frequencies, 2002/03 – 2007/08.



***all sub-legal fish were grouped together
 Source: Sampler examined landed catch data from Marine Recreational Fisheries Statistics Survey and California Recreational Fisheries Survey.
 Note: 2003/04 – 2007/08 recreational data are from a different survey program than used in previous years.

Figure 2. Recreational white seabass sampled length frequencies, 2002/03 – 2007/08.



Northern anchovy, jack mackerel, and Pacific sardine season is January 1 through December 31.

Market squid season is April 1 through March 31 of the following year.

Pacific mackerel season is July 1 through June 30 of the following year.

Source: Commercial Fisheries Information System

Figure 3. Harvest guidelines and commercial catch of white seabass forage species.