Appendix G. Methods and Data Sets

G1 Methods

G1.1 Recreational

Commercial Passenger Fishing Vessel (CPFV) data from Department databases were used rather than RecFIN, because the Department's CPFV logbook data is thought to be more accurate than MRFSS's RecFIN estimates for CPFV. In addition, Department data can be used to identify the DFG block locations where fish are caught. Although RecFIN data estimates for recreational fishing modes for private/rental boats, man-made structures and beaches was the best data available, many of these data sets had high standard errors, especially those for shore-based fishing modes.

Since RecFIN length data for white seabass was taken in fork lengths (FL), and RecFIN's total length conversion option yielded the same measurements, 15 mm (0.59 in.) was added to RecFIN fork length data to convert to total length (TL). This was done in order to better estimate the number of legal size (28 in. (711 mm TL)) fish kept by different recreational fishing modes. Tim Hovey, a former hatchery manager for the HUBBS white seabass hatchery, recommended 15 mm and no other conversion factor was found.

<u>Historical CPFV logbook data</u>

Annual estimates of landings, effort, and CPUE were calculated for white seabass using CPFV logbook data from 1995 to 1999. Annual estimates of landings (number of fish) for white seabass were calculated by summing white seabass landings from all identified white seabass trips from each year. Annual estimates of effort (angler-days) were calculated by summing the total number of passengers from all white seabass trips from each year. This effort calculation was based on the assumption that each submitted CPFV log represented one trip-day, and therefore, the number of angler-days for each trip was equal to the number of passengers. Annual estimates of CPFV (number of fish per 100 angler-days) was calculated by taking the annual estimate of landings and dividing it by the annual estimate of effort, then multiplying the result by 100.

CPFV hook-and-line trips were separated from CPFV diving trips using catch composition and trip information from the logs and vessel information. Logs with CDFG blocks for Mexico and the San Francisco Bay Delta were removed from the hook-and-line data. Next, records with invertebrate species, species codes or landings equal to zero, or missing data were deleted. Finally, white seabass trips were selected from the remaining data using the following procedure: Total landings for each trip were calculated for three groups: A) white seabass, B) white seabass, yellowtail, and California barracuda, and C) all finfish species except white seabass, yellowtail, California barracuda, Pacific bonito, Pacific mackerel, jack mackerel, and kelp bass. A trip was considered a white seabass trip if the total landings of white seabass were greater than 10% of the landings of white seabass in group C combined, or if the total landings from group B was greater than 50% of the landings of groups B and C

combined.

G1.2 Commercial

The data used to identify commercial fish landings and trends came from the Department's Commercial Fishing Information System. These data are entered into a computerized database. The procedures used to ensure accuracy are as follows: The landing receipt data was entered into the database, then a complete line by line check of the landing receipt was done. Whenever questions arose regarding information on the landing receipt a call was placed to the fish business or vessel operator to obtain accurate information. Since 1996, Department biologists have pre-edited landing receipts before the data is entered into the system. This procedure has improved the accuracy of the database.

Extracts of commercial data were done for white seabass from January 1981 to September 2000. For all fields (i.e., boat number, license number, pounds landed, or fishing gear) where there was missing data, the procedure was to check the original landing receipt whenever possible. If that information was not available, the data was sorted by vessel identification number or fisherman license number to determine what gear was typically used or price received for seabass. If a fisherman used more than one gear type, his catch was assigned to the gear most often used.

G2 Data Sets

Catch Data	Source	Years	Availability	Units
Commercial				
California waters	CDFG	1916 to present	Published (CDFG Fish Bulletins)	Weight
Mexican waters	CDFG	1936 to 1981	Published (CDFG Fish Bulletins)	Weight
Recreational				
Comm. Passenger Fish. Vessel	CDFG	1936 to present	Published (CDFG Fish Bulletins)	Number
Long Range Party boats	CDFG	1960 to present		Number
Barge	CDFG			Number
	MRFSS	1980 to present	www.psfmc.org/recfin	Number/weight
Private boat	CDFG	1964	Published (CDFG Fish Bull. 143)	Number
	MRFSS	1980 to present	www.psfmc.org/recfin	Number/weight
Pier and Jetty	CDFG	1963		Number
	MRFSS	1980 to present	www.psfmc.org/recfin	Number/weight
Shoreline	CDFG	1965-66		Number
Beach and bank	MRFSS	1980 to present	www.psfmc.org/recfin	Number/weight

Socioeconomic data	Source	Years	Availability	Units
commercial				
ex-vessel revenue	CDFG	1980-2000	unpublished data	dollars
market price	CDFG	1980-2000	unpublished data	dollars
vessels	CDFG	1980-2000	unpublished data	number
processors	CDFG	1980-2000	unpublished data	number
recreational				
trips	MRFSS	1993-1999	www.st.nmfs.gov/recreational/index.html	number
anglers	MRFSS	1993-1999	www.st.nmfs.gov/recreational/index.html	number