

## Supplemental Report 1: Past Status Determination Methodologies and Allocation History

### Historic Status Determination Methodology

The Marine Life Management Act (MLMA) mandate to sustainably manage the state's resources included setting conservative annual harvest amounts for recreationally and commercially important species based on the estimated status of the stock. The Commission adopted annual harvest amounts in its interim regulations for cabezon, California sheephead, and greenlings in December 2000—until harvest amounts could be revisited when the Nearshore Fishery Management Plan (NFMP) was implemented. These interim annual harvest amounts were derived from a method for "data limited" situations (e.g. species not formally assessed) based on the work of Restrepo (1998) [described below]—setting harvest amounts at half of historical catch. Between 2000 and 2003, the Commission twice revised the total allowable catch (TAC) based upon different historical catch time periods (see Table S1). The NFMP adopted this methodology as well, for data limited species (categorized as Stage 1 management in the NFMP).

"Catch history is the only, or primary, information available. The response is a precautionary approach in which a limit is placed on catches of all target species that is equal to a fraction of the average catch of some series of years *when there was evidence that abundance was not declining*. The imposed reduction is an application of risk management that provides a reasonable expectation that overfishing will be avoided at the reduced level of catch. In the absence of information to the contrary, the fraction will be 50%, which assumes that the stock is below the target biomass but above the overfished threshold. This approach is consistent with that described in Restrepo et al. (1998) for dealing in a precautionary manner with fishery management in a data-poor [data-limited] environment. As the information improves, TACs can be revised upwards or downwards accordingly." [Section 1, Chapter 3, NFMP 2002]

When choosing the current TAC in 2003, the Commission followed these precautionary guidelines by setting the TAC at a level that is 50 percent of the average catch during the window period years of 1993-1999. The Department/Commission chose this period because 1) there was adequate catch/landings data for the commercial and recreational fisheries, 2) it was the most recent information available, and 3) the stock was not thought to be declining (although its status was unknown). The MLMA also mandates a science-based approach to management—although the Restrepo method is only based on catch. The current TAC served as the basis for the existing allocations.

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Restrepo, V. R. et al. 1998. Technical Guidance On the Use of Precautionary Approaches to Implementing National Standard 1 of the Magnuson-Stevens Fishery Conservation and Management Act. NOAA Technical Memorandum NMFSF/SPO-40.

### Allocation History

Following the enactment of the Marine Life Management Act and the Nearshore Fisheries Act in 1998, the Department developed and the Commission adopted a series of interim management measures to establish sustainable harvests for cabezon, greenlings, California sheephead (CGS) and later other nearshore stocks. New management measures were based on the best available information. At the time, commercial landings information was available from the Department's Commercial Fisheries Information System on a port basis for CGS, although it was based on market categories which were of questionable accuracy due to the use of many "group" market categories (when nearshore species were not always individually separated.) Recreational catch estimates were summarized from the federal Marine Recreational Fisheries Statistical Survey (MRFSS)—which only separated the state into two regions separated at Point Conception. The MRFSS sampling effort in northern California (north of Cape Mendocino) was limited, and as a result, estimates for species like greenlings which are more common in the north are less accurate. Figure S1 shows the recreational and commercial catch from 1983 through 1999; the expansion of the commercial live fishery is finally apparent beginning in 1996. The catch history through the entire window period was combined to determine the allocation proportions in use today.

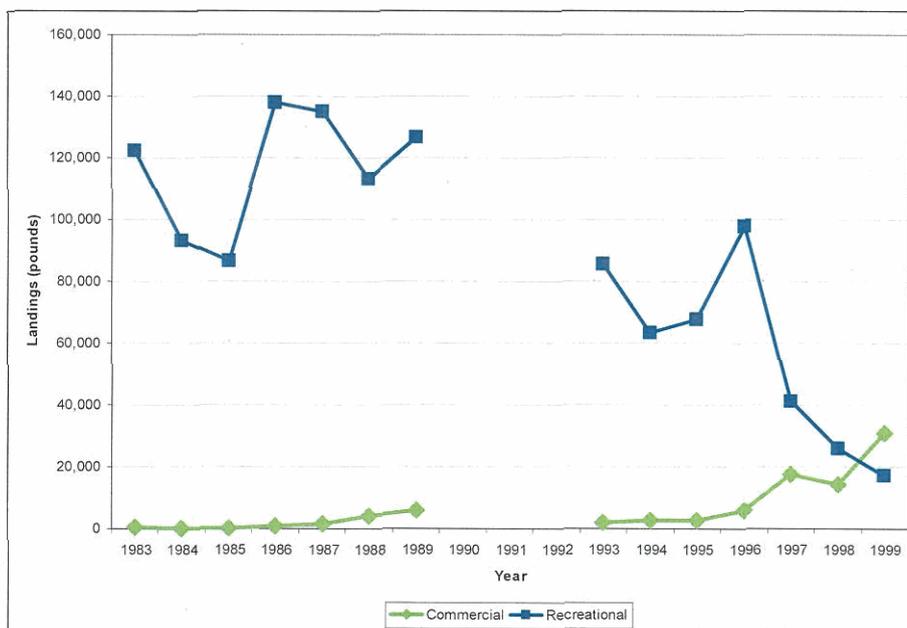


Figure S1. Greenling landings (in pounds) for the commercial and recreational sectors during the NFMP window period (1983-1989 and 1993-1999). Data from 1990-1992 was not used/available due to the temporary discontinuation of recreational sampling. (Data sources: CFIS/CMASTR and MRFSS extracted on 10-06-10)

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Table S1-1. Summary of Commission regulatory actions, TACs, and sector allocation amounts for greenlings from 2000 through present.

Description of Regulatory Action	TAC	Commercial		Sport	
		Pounds	% of TAC	Pounds	% of TAC
1. October 2000 – Under interim management, the Commission gave direction to use 50% of average of recent catches (1993-1999) to set the optimal yield (OY), and to determine allocation from catch ratios from 1983-89 and 1993-99	39,823	5,172	13%	34,651	87%
2. December 2000 - Commission agreed to these expected catches as the interim allocations for 2001 based on a) projections of catch that incorporated restrictions specified in the interim measures (day/month closures, size limits) and b) estimates of recreational catch that indicated the full sport allocation would not be taken	39,823	13,420	34%	26,403	66%
3. August 2001 - Emergency rulemaking actions - these figures were cited in regulatory documents used to close commercial fisheries in the summer of 2001, incorporating values from both 1 and 2 above	39,823	13,420 (added 6,000 pounds to commercial allocation)	34%/48%	26,403 (removed 6,000 pounds from recreational allocation)	66%/52%
4. February 4, 2002 - Allocations reaffirmed on Subcommittee conference call, acknowledging the policy decision to set OY at 50 percent of average of recent catches	39,823	3,420	34%	26,403	66%
5. August 12, 2003 - Commission adopted regulatory changes that provided for one statewide TAC <sup>1</sup> also based on updated historic catch from 1993-1999; with the allocation ratio revised to use a historical ratio between the commercial and recreational CGS* fisheries based on 1983-1989 and 1993-1999 catches (regulations effective December 7, 2003 and still in use through 2011).	<b>37,600</b>	<b>3,400</b>	<b>9%</b>	<b>34,200</b>	<b>91%</b>

\*CGS=Cabazon, Greenlings and Sheephead

<sup>1</sup> TAC terminology adopted to replace OY