

## DRAFT CALIFORNIA DEPARTMENT OF FISH AND GAME REPORT ON INSEASON MANAGEMENT PROPOSALS FOR THE 2006 CALIFORNIA RECREATIONAL FISHING SEASON

### BACKGROUND AND PROPOSED ACTION

The Pacific Fisheries Management Council (Council) approved inseason changes to California's recreational 2005 season and depth structure at its March 2005 meeting. The Council, in adopting these changes, took into account a number of factors including: 1) the 2004 annual California Recreational Fisheries Survey (CRFS) estimates of recreational take which showed that harvest of overfished species was below their respective California recreational harvest targets in 2004; and 2) the improved ability for real-time inseason catch monitoring through the new CRFS program. The March 2005 inseason changes provided more recreational fishing opportunity while keeping projected impacts (derived from California's recreational catch model) within recreational harvest guidelines or allocations for overfished and constraining species.

In early February 2006, complete CRFS estimates of recreational take for 2005 (through December) became available. These estimates indicated that even under the modified management structure (with increased fishing opportunities), the California recreational harvest guidelines or allocations for overfished species were not exceeded and, in some cases, catch was well below the projected impacts. These results suggest that the current 2006 management structure could be further modified to allow for additional fishing opportunities while still remaining within recreational harvest targets for overfished and constraining species. The California Department of Fish and Game is exploring what specific options would be appropriate for inseason consideration, and intends to provide these options at the March PFMC meeting for discussion. The modeling approach for projecting impacts is described below. This approach has already been reviewed and approved by the Groundfish Management Team for use in crafting 2007-2008 recreational fishery management options.

### PROPOSED METHODOLOGY FOR PROJECTING IMPACTS

Impacts from the proposed changes to the current 2006 management structure will be evaluated using an updated version of California's recreational catch projection model using 2004 and 2005 data to project future fishing behavior.

#### **I. Background**

The recreational catch model incorporates a number of parameters and assumptions, all of which are either risk-neutral or risk-adverse. The basic analytical approach is the same as that used for the 2005-06 model projections. Because the estimates from the CRFS program and the original Marine Recreational Fisheries Statistics Survey program have not been calibrated, only the 2004 and 2005 annual catch estimates obtained from the new CRFS program serve as the baseline

catches. The model uses a 0.67 decay function (which translates into a weighting of 60% for 2005 and 40% for 2004). Reasons for weighting the 2005 estimates more heavily than the 2004 estimates include: the recognition that constraints placed on salmon fishing in 2005 will likely persist over the next several years; and the acknowledgement that the expanded distribution and greater abundance of blue rockfish (as well as other groundfish species) due to cooler oceanographic conditions will also likely persist into 2007 and 2008. Model output predicts expected catch under any combination of season and depth fishing restrictions by region. Reasons for using 2004 data include: the recognition that oceanographic conditions in 2005 were unusual while conditions in 2004 are more in line with what might be expected in 2007-2008 under a colder water regime; and the expectation that the bulk of blue rockfish take (and potentially brown and olive rockfish take) will occur within deeper nearshore waters as was observed in 2004 rather than in the shallow nearshore waters as in 2005.

#### Management Region Definitions:

North Region:	North of 40°10' N lat to CA/OR border
North-Central Region:	South of 40°10' N lat to 37°11' N lat (Pigeon Pt.)
South-Central Monterey Region:	South of 37°11' N lat (Pigeon Pt.) to 36° N lat (Lopez Pt.)
South-Central Morro Bay Region:	South of 36° N lat (Lopez Pt.) to 34°27' N lat (Pt. Conception)
South Region:	South of 34°27' N lat (Pt. Conception) to CA/Mexico Border

## **II. CDFG/California Recreational Groundfish Model Assumptions**

- **Effort Shift Inshore:** The model includes a 27.6% increase in expected landings when fishing is restricted to less than 30 fm and a 39.3% increase in expected landings when fishing is restricted to less than 20 fm. The increase, or effort shift, is to account for increased effort in a smaller fishing area.
- **Discard Mortality:**
  - 1) Canary, cowcod, and yelloweye rockfish are non-retention species. Therefore, expected mortality estimates for these species also include B2 fish (fish reported to be released live) with hooking mortality rates as follows:
  - 2) CA scorpionfish hooking mortality rate is assumed to be 5%. This rate is applied to expected landings of CA scorpionfish when fishing is allowed for species which associate with CA scorpionfish, but fishing for CA scorpionfish is not allowed.

## **III. Inputs and Key Parameters for the Model**

- **Base Year Catch:** Initially, CRFS catch estimates in WEIGHT of fish were summed for caught and retained (CRFS “A” catch), filleted/caught and released dead (CRFS “B1” catch), and for species of concern, a proportion of CRFS “B2” catch (released alive) derived using depth-based mortality estimates. Base year catch estimates are assumed to be for an unrestricted fishing year with no months closed and no depths closed. Therefore, for 2004 and 2005, a back calculation method was used to add a catch estimate for what the catch would have been if all months and all depths had been open.

This back calculation uses percent catch by month and depth derived from historical catch estimates.

- Historical Catch By Month: Estimates of historical percent catch by two-month period were calculated for each region based on RecFIN Marine Recreational Fisheries Statistics Survey (MRFSS) data (weight of A+B1) from 1993-1999, which was a time period when seasons and depths were unconstrained. Proxies were considered on a species by species basis for regions where there was a lack of catch data for that area. Monthly estimates of percent catch then were divided equally (50:50) for each pair of months.
- Historical Catch By Depth: Estimates of percent catch by depth were calculated for each region based on RecFIN MRFSS depth sample data (numbers caught A+B1 for CPFV and A+B1+B2 for PR) from 1999-2000, which was a time period when depths were unconstrained. Proxies were considered on a species by species basis for regions where there was a lack of catch data for that area.