

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
PACIFIC WHITING MANAGEMENT

Mr. Tom Jagielo from the Scientific and Statistical Committee (SSC), and Chair of the Joint Canadian and U.S. Stock Assessment and Review (STAR) Panel for Pacific whiting, presented the SSC with an overview of the STAR Panel report. Dr. Thomas Helser, lead author of the Stock Assessment Team report, responded to questions arising during the SSC discussions.

The new stock assessment is an update of the 2004 assessment that includes additional data for catch, catch-at-age, and juvenile pre-recruit abundance in 2004, but otherwise uses the same model structure and configuration. As in the previous assessment the major source of uncertainty in the updated assessment is the value of the catchability coefficient (q) for the acoustic survey. Both the 2004 assessment and the 2005 update developed stock size estimates and catch projections based on assumed values for the acoustic survey q . The SSC concurs with the views of the STAT Team and STAR Panel that the two alternative models ($q = 1.0$ versus $q = 0.6$) are equally likely and provide plausible lower and upper bounds on stock status.

The age-3+ stock biomass in 2004 was estimated to range from 2.5 to 4.0 million metric tons, with the 2004 fishery supported primarily by the very strong 1999 year-class. Although spawning biomass was estimated to be 50% to 59% of the unfished level in 2004, it is projected to decline after 2005 because of relatively weak year-classes in 2000-2002. Optimum yield (OY) is projected to decline in 2006 relative to 2005, with further declines in 2007.

The SSC recommends that the decision table (Table 14 in the stock assessment document, Agenda Item F.6.a, Attachment 1) be used to evaluate the alternative OY options for 2005. This table shows the consequences for stock biomass when OYs are taken based either on the $q = 1.0$ or $q = 0.6$ model, given that the true situation is consistent with one or the other model. The entries in the lower left and upper right boxes show the "penalties" for using the incorrect model. If the OY is incorrectly based on the $q = 0.6$ model, greater harvests could accrue (1.4 million tons during 2005-2007), but there is a 50:50 chance that the stock would be reduced to 20% of the unfished biomass in 2007 and declared overfished. If the OY is incorrectly based on the $q = 1.0$ model, there is much less of a chance the stock would be declared overfished, but smaller harvests would accrue (0.87 million tons during 2005-2007).

The SSC also received a brief verbal report from Dr. Vidar Wespestad, Chief Scientist of the Pacific Whiting Conservation Cooperative (PWCC). Since 2001 the PWCC, in conjunction with the NMFS Northwest Fisheries Science Center (NWFSC), has conducted surveys of juvenile Pacific whiting and rockfish off Oregon and California using gear and survey protocols that are comparable to the pre-recruit survey conducted by the Southwest Fisheries Science Center (SWFSC) Santa Cruz Laboratory. Pacific whiting assessments since 2001 have used the SWFSC pre-recruit survey results as a recruitment index. The PWCC survey, which may in the future be incorporated into the whiting assessment, has broader geographic coverage than the SWFSC survey and could provide information on year-class strength that would supplement the SWFSC survey and improve model projections. The 2005 coastwide acoustic survey will measure the strength of the 2002 and 2003 year-classes and corroborate the relative accuracy of the two surveys.