

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
STOCK ASSESSMENTS FOR 2007-2008 GROUND FISH FISHERIES

April 18-22 STAR Panel, Seattle, Washington - English Sole, Petrale Sole, Starry Flounder

English Sole

The SSC reviewed the assessment and Stock Assessment and Review (STAR) Panel reports for English sole (*Parophrys vetulus*). The stock of English sole off the U.S. West Coast had not previously been assessed on a coastwide basis; the most recent previous assessment, completed in 1993, was restricted to the stock off Oregon and Washington. The new assessment reconstructed the catch history back to the late 1800s, the assumed start of fishing. For the analysis the stock was divided into southern and northern fisheries and surveys, with detailed length and age composition data available primarily for the northern fishery. The only observations of trends in relative biomass were from the National Marine Fisheries Service (NMFS) triennial shelf bottom trawl survey, which has indicated very large increases during the past decade in the biomass of English sole in both the southern and northern areas. The assessment concludes that the spawning stock biomass of English sole at the start of 2005 was 92% of the unexploited level and that current exploitation is very low. The SSC found this to be a very thorough assessment and endorses the English sole stock assessment as providing the best available science and can form the basis for Council decision-making.

Starry Flounder

The SSC reviewed the assessment and STAR Panel reports for starry flounder (*Platichthys stellatus*). This is the first assessment of starry flounder off the U.S. West Coast. It is based on the assumption of separate biological populations north and south of the CA / OR border and uses data on catches, indices of relative abundance based on trawl logbook data, and an index of age-1 abundance from trawl surveys in the San Francisco Bay and Sacramento-San Joaquin River estuary. Unlike most other groundfish stock assessments, no age- or length-composition data are directly used in the assessment. Both the northern and southern populations are estimated to be above the target level of $B_{40\%}$, although the status of this data-poor species remains fairly uncertain compared to that of many other groundfish species. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

Petracle Sole

The Petrale sole (*Eopsetta jordani*) Stock Assessment Team (STAT) decided to treat the population off the U.S. West Coast as separate northern and southern stocks. The assessment for the northern stock was withdrawn from the April STAR Panel review because age-composition data for recent years, which might influence the assessment's estimate of current stock status, arrived during the review. The assessment for the northern stock will be reviewed during the mop-up STAR Panel in late September.

The SSC reviewed the assessment and Draft STAR Panel reports for the southern stock of petrale sole. The revised assessment document received following the STAR Panel was incomplete and could not be thoroughly reviewed and approved by the SSC. The STAT Team

will be informed of the missing information and the SSC will review the revised document at its November meeting. Depending on the outcome of the mop-up STAR review of the northern petrale assessment, the SSC may request additional analyses from the STAT team for the southern petrale assessment.

May 9-13, 2005 STAR Panel, Long Beach, California - Cowcod, Gopher Rockfish, Vermilion Rockfish, and California Scorpionfish

Gopher rockfish

The SSC reviewed the assessment and STAR Panel report for gopher rockfish (*Sebastes carnatus*). This is the initial assessment of gopher rockfish. Though the distribution of gopher rockfish extends south into the Southern California Bight, the assessment is restricted to the stock north of Pt. Conception. The assessment is based on landings and length composition data from commercial and recreational fisheries (primarily hook and line gear), and an index of relative abundance (catch per unit effort) from the commercial passenger fishing vessel (CPFV) Sportfish Survey database. These data sources were used to estimate population trends from 1965 to 2004. There are no fishery-independent indices of stock biomass for gopher rockfish. Assessment results indicate an upward trend in gopher rockfish biomass since the 1980s and estimates of 2005 abundance ranged between 60% and 110% of average unfished stock size. Recent exploitation rates are estimated to have been well below the F_{MSY} proxy for rockfish. The SSC endorses the STAR Panel conclusions that this assessment represents the best available science and can form the basis for Council decision-making.

Vermilion rockfish

The SSC reviewed the assessment and STAR Panel report for vermilion rockfish (*Sebastes miniatus*). This is the initial assessment of vermilion rockfish. The assessment is restricted to the stock in California waters. Separate assessment models were developed for the stock north and south of Pt. Conception. Recent genetic research indicates that vermilion rockfish is actually two species, however nothing is known about biological differences between the two species, or their relative abundance. The two species were assessed as a single stock. The assessment uses data on recreational and commercial catches, length-frequency data, and indices of relative abundance derived from CPFV and RecFin CPUE data. There are no fishery-independent indices of stock biomass for vermilion rockfish. Biomass estimates for most model configurations show an upward trend since about 1990, and recent exploitation rates are estimated to be near the F_{MSY} proxy for rockfish. However, fishing mortality rates may have exceeded the F_{MSY} proxy for rockfish historically, and vermilion rockfish may have dropped temporarily below the overfished threshold prior to the recent increase. For the northern component, estimates of 2005 biomass ranged between 41% and 89% of average unfished biomass, while for the southern component, the range was between 30% and 88% of average unfished biomass.

The STAR Panel was unable to identify a base model for vermilion rockfish, and instead proposed a pair of models to illustrate the range of uncertainty in stock status. The STAR Panel concluded the stock does not currently appear to be overfished and overfishing is not occurring. The SSC does not fully concur with the STAR Panel conclusions. The SSC notes the available data indicate the stock was overfished in the past, and a few recent extreme values appear to drive the recent upward trend in abundance. The assessment model produced divergent results and exhibited extreme sensitivity to what should be innocuous changes in data or assumptions.

Vermilion rockfish is currently in a group of data-poor rockfish that are subject to restrictive management. Given concerns about assessment reliability, the SSC questions whether moving vermilion rockfish out of this data-poor group and basing management on this stock assessment can be justified. SSC considers the assessment to be best available science, but at this stage does not endorse the results as being suitable for setting OYs.

Cowcod

The SSC reviewed the assessment and STAR Panel report for cowcod (*Sebastes levis*). The first assessment of cowcod in 1999 led to the stock being declared overfished and the establishment of a rebuilding plan. Like the previous cowcod assessment, this assessment is restricted to the stock south of Pt. Conception, although the distribution of cowcod extends further north. The assessment is based on catch data from commercial and recreational fisheries, an index of relative abundance (catch per unit effort) derived from commercial passenger fishing vessel (CPFV) data from 1963-2000, and a single visual transect survey conducted by submersible in the Cowcod Conservation Area (CCA) in 2002. Although assessment results suggest that cowcod are less depleted than was estimated in the initial cowcod assessment, they are still overfished by Council criteria. Estimates of stock size in 2005 ranged from 14 to 21% of mean unfished stock size depending on a plausible range of assumptions for the stock-recruit relationship. Rebuilding measures appear to have been successful in reducing cowcod exploitation rates to negligible levels. The SSC endorses the STAR Panel conclusions that this assessment represents the best available science and can form the basis for Council decision-making.

California scorpionfish

California scorpionfish (*Scorpaena guttata*) is related taxonomically to rockfish, but exhibits different behavior and biology. Unlike rockfish, scorpionfish form dense spawning aggregations and release eggs rather than larvae. Although the species ranges south into Mexican waters, the assessment evaluates stock status in US waters south of Pt. Conception. This is the first stock assessment of California scorpionfish. The assessment is based on landings and length composition data from commercial and recreational fisheries and an index of relative abundance (catch per unit effort) derived from commercial passenger fishing vessel (CPFV) logbook data from 1980-1999. A fishery-independent index of abundance was obtained by aggregating nearshore trawl surveys conducted by sanitation districts to assess outfall impacts. Assessment results indicate an upward trend in California scorpionfish biomass since the 1970s. Estimates of 2005 stock abundance ranged between 60% and 80% of average unfished stock size. Estimates of historical exploitation rates are uncertain, but apparently were significantly higher than the Council's FMSY proxy of $F_{50\%}$ for most of the last three decades. The current high abundance of scorpionfish is surprising given historical exploitation rates, and may be a result of favorable environmental conditions. The SSC endorses the STAR Panel conclusions that this assessment represents the best available science and can form the basis for Council decision-making.

May 16-20, 2005 STAR Panel, Seattle, Washington – Pacific Ocean Perch, Darkblotched Rockfish, Cabezon

Darkblotched Rockfish

The SSC reviewed the assessment and STAR Panel report for darkblotched rockfish (*Sebastes crameri*), which was assessed as a single stock ranging from California to the Canadian border. The last full stock assessment occurred in 2000 and estimated spawning biomass was 22% of the unfished level. It was subsequently declared overfished in January 2001 and a rebuilding plan was implemented, based on results from an updated assessment conducted in 2001. The assessment model was again updated in 2003 using recent data. Notably, both updated stock assessments concluded the stock was considerably more depleted than the original assessment. The 2005 analysis was a full assessment and incorporated a number of significant changes to the model, including: (1) use of Stock Synthesis II, (2) starting the model in 1928 vs. 1963, (3) estimating growth parameters within the model, (4) estimation of discard rates and retention curves within the model, (5) eliminating all age composition data except for shelf trawl survey ages read in 2004, and (6) use of delta-GLM estimates of abundance from the AFSC slope survey. Model estimates of abundance are influenced primarily by four fishery-independent surveys, i.e., the AFSC triennial shelf, POP, and slope trawl surveys and the NWFSC slope trawl survey. Results of the assessment indicate that spawning output has more than doubled since 1999 (i.e., 8% to 17% of the unfished level) and that rebuilding is occurring due to strong 1999 and 2000 year-classes. Moreover, recent exploitation rates have been quite low (2-3%). The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

Pacific Ocean Perch (POP)

The SSC reviewed the updated assessment and STAR Panel report pertaining to the stock of Pacific ocean perch (POP, *Sebastes alutus*) residing in the combined U.S. Vancouver-Columbia INPFC areas. Historically POP catches were characterized by removals in excess of 5,000 mt per year⁻¹ from 1962-68, largely due to extensive foreign fishing. In 1981 the Council adopted a 20-yr plan to rebuild what was considered a depleted resource, representing the first attempt at stock rebuilding by the PFMC. POP was declared overfished in 2001 and a rebuilding plan was officially adopted as Amendment 16-2 to the Groundfish FMP. The 2005 assessment is an update of the stock assessment model prepared in 2003. Consequently the model code is unchanged but data time series were extended to include: (1) catches through 2004, (2) fishery size compositions for 2003 and 2004, (3) NWFSC slope survey biomass estimates through 2004, (4) NWFSC slope survey age compositions for 2001, 2003, and 2004, (5) the triennial shelf survey biomass estimate for 2004, and (6) triennial shelf survey age compositions for 1995 and 2004. Results of the assessment show that exploitation rates have been very low since 2000 (1% per yr) and that the stock is slowly rebuilding (relative spawning stock biomass in 2005 was 23%, up from 21% in 2000). Relatively strong recruitments occurred in 2002 and 2003, representing the 1999 and 2000 year-classes. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

Cabazon

The SSC reviewed the assessment and STAR Panel report for cabazon (*Scorpaenichthys marmoratus*). The assessment only considered cabazon residing in the State of California and divided the population into two stocks, one north of Point Conception (NCS) and one south of Point Conception (SCS), based on different historical patterns of exploitation. The northern stock has been the primary area from which removals have occurred, principally due to a greater commercial harvest in that region. Splitting the assessment model into separate northern and southern stocks departs from the approach taken in the previous assessment that was conducted in 2003, which treated the entire State as a unit stock. In addition, six fisheries were modeled for each substock (four recreational and two commercial) and three trend indices were evaluated for each area. Results of the assessment show that exploitation rates for the NCS and SCS stocks are close to their target values ($F_{45\%}$). Depletion levels, however, differ among the two areas, with the NCS stock close to its target population size ($B_{40\%}$), while the SCS stock is close to the minimum stock size overfished threshold ($B_{25\%}$). Furthermore, assessment results show that spawning output from the SCS stock was very low as recently as 2002 (i.e., 5% of the unfished level), but that strong recruitment has apparently occurred due to the 2000 and 2003 year-classes. Uncertainty about the strength of the 2000 year-class, in particular, was highlighted in a decision table analysis. The stock assessment included projections for both stocks under the Council's default 40:10 harvest policy, as well as the State of California's nearshore management plan 60:20 harvest policy. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

June 20-24, 2005 STAR Panel, Newport, OR – Sablefish, Dover Sole, Shortspine Thornyhead, Longspine Thornyhead

Sablefish

The SSC reviewed the sablefish (*Anoplopoma fimbria*) assessment and STAR Panel reports. A summary of the assessment was presented by the lead author, Dr. Michael Schirripa. This assessment extends from the southern border of the Conception INPFC area through the northern border of the U.S. Vancouver INPFC area. This stock has been assessed several times in recent years. The most recent previous full assessment was in 2001, which formed the basis of an "update" that was conducted in 2002 so that new information could be included to better estimate the abundance of the comparatively strong 1999 and 2000 year classes.

Sablefish are taken in the commercial fishery with hook and line, pot, and trawl gear. Estimates of landings by gear are available beginning in 1915, and landings were projected further back to an assumed start of the fishery in 1900 for this assessment. As in previous assessments, this assessment makes use of several abundance indices: the 1980-2004 AFSC triennial shelf survey, the 1971-1991 AFSC pot survey, the 1997-2001 AFSC slope survey, the 1984-2004 NWFS slope survey, and the 1978-1988 logbook CPUE index. The Base Model for the assessment included use of sea level data to model recruitment deviations from the stock-recruitment function. Also, sea surface temperature data were used to model discard mortality rates which in the previous assessment were assumed to be 100%.

The Base Model spawning biomass for 2005 is estimated to be 35% of the unfished size, with an increasing trend during the past few years due to the comparatively strong 1999 and 2000 year classes. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

Dover sole

The SSC reviewed the assessment of Dover sole (*Microstomus pacificus*) and the STAR Panel report. A summary of the assessment was presented by the author, Dr. David Sampson. Dover sole that reside in the waters off California, Oregon and Washington were treated as a single stock in the assessment. This stock was last assessed in 2001.

The length and age composition data were separated into two fisheries: a northern fishery operating in the U.S. Vancouver and Columbia INPFC regions and a southern fishery in the Eureka, Monterey and Conception regions. The period modeled in the assessment extended from 1910 to 2004 with fishing beginning in 1911. Data in the assessment model included fishery length composition data from 1966 to 2004 and fishery age composition data from 1981 to 2004. The biomass indices were derived from trawl logbook catch rates (1978 to 1995), and biomass estimates and length and age composition data from bottom trawl research surveys of the shelf (1980 to 2004) and slope (1992 to 2004).

The size and sex distributions of Dover sole are highly variable, by depth and among INPFC areas, and have changed over time. These patterns and other size related issues, such as a tendency for the fish discarded in the south fishery being larger than those retained, were difficult to model in the assessment. Convergence issues complicated the choice of a Base Model. However the STAR Panel and STAT were able to choose one based on the preliminary Base Model and sensitivity analyses for the spawner-recruit steepness parameter (h) and natural mortality (M).

The stock has exhibited an increasing trend since about 1995, with the spawning biomass for 2005 estimated to be 63% of the unfished level. The SSC endorses the Dover sole stock assessment as providing the best available science and recommends that it form the basis for Council decision-making.

Shortspine Thornyhead

The SSC reviewed the shortspine thornyhead (*Sebastolobus alascanus*) assessment and STAR Panel reports. A summary of the assessment was presented by the author, Dr. Owen Hamel. This stock occurs from Baja California to the Bering Sea and is most abundant in the depth range of 180-450 meters. Shortspine thornyhead have been assessed several times over the last 15 years, most recently in 2001.

The largest modeling changes from the previous assessment are that the current assessment encompasses the entire west coast and the slope surveys are modeled as having dome-shaped selectivity. The previous assessment excluded those areas south of Pt. Conception, and including the entire Conception area results in a larger basis for unfished biomass. Other changes compared to the previous assessment included the addition of catch estimates for 1901-1961, new estimates of the shortspine portion of “unspecified thornyheads” in recent landings, recalculated length compositions for the fishery in 1981-2004, and new discard rates based on the west coast groundfish observer program for 2002 and 2003.

The Base Model for this assessment describes a single stock with two fisheries, north and south. Because of the sparseness and quality of the data, natural mortality, steepness and survey efficiency (q) were all fixed. The STAR Panel noted that the supporting data and the subsequent assessment were just marginally sufficient to estimate the resource status. Therefore the biological reference points and the forecasts in the decision table should be considered with

caution. There could be regional management concerns with this stock because the assessment OY is coastwide while there are differences in historic exploitation rates north and south of Point Conception.

The spawning biomass for 2005 is estimated to be 63% of unfished abundance, with a weakly falling recent trend. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

Longspine Thornyhead

The SSC reviewed the longspine thornyhead (*Sebastolobus altivelis*) assessment and STAR Panel reports. Longspine thornyhead have been assessed three times previously, most recently in 1997. The model assumed one coastwide stock (Conception to U.S. Vancouver areas), with one coastwide trawl fishery. Fishery independent survey data was combined as a single index based on a GLM of the AFSC and NWFSC slope surveys, which produced abundance indices and length compositions.

Results from the Base Model suggested that survey information (length compositions) was influencing recruitment in the model, such that the model estimated slightly higher recruitment in the early 1990s, which declined in the mid to late 1990s. The spawning biomass in 2005 was approximately 71% of unfished spawning biomass, but this estimate is highly uncertain as is evident in the comparatively large 95% confidence interval for the spawning biomass. A suite of sensitivity analyses bracketed some of the areas of uncertainty in catchability, selectivity, mortality and steepness that formed a basis for considering and discussing major areas of uncertainty for the decision table. The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

August 1-5, 2005 STAR Panel, Santa Cruz, CA – Widow Rockfish, Bocaccio, Blackgill Rockfish, Kelp Greenling

Widow Rockfish

The SSC reviewed the assessment and Stock Assessment and Review (STAR) Panel reports for widow rockfish (*Sebastes entomelas*). The stock, which was last assessed in 2003, is treated as a single coastwide stock harvested by four fisheries. The new assessment uses the same age-based model as the 2003 assessment with updated landings data, additional age composition data, and revised abundance indices. Although the assessment could have been treated as an update, it was reviewed as a full assessment.

In 2000 the stock was assessed as being overfished and has been subject to a rebuilding plan since 2001. The current assessment's base model estimates that spawning biomass declined steadily since the late 1980s and that spawning output in 2004 was 31% of the unexploited level, above the Council's minimum stock size threshold (MSST). Further, spawning output in the base model was estimated to have never dropped below the 25% overfished MSST. Alternative model runs, which were considered to be only slightly less plausible than the base model, however, indicated that the stock had been below the MSST. Lack of a reliable abundance index for widow rockfish is a major source of uncertainty for the assessment results.

The SSC endorses the STAR Panel conclusion that this assessment represents the best available science and that it can form the basis for Council decision-making.

Bocaccio

The SSC reviewed the assessment and STAR Panel report for bocaccio (*Sebastes paucispinis*), which was evaluated under the Terms of Reference for Expedited Stock Assessments. The assessment completed this year is an update, which requires close adherence to the last assessment that was conducted in 2003. Two important time series of data were extended this year, including the AFSC triennial shelf trawl survey and the CalCOFI larval abundance index, both of which were updated using a GLM analysis. In addition, fishery and survey length-distributions were updated through 2004. The STAR Panel agreed that the analysis satisfied the basic requirements for an expedited assessment, i.e., the model was identical to the 2003 assessment because SS1 was retained as the analytical framework and no structural changes to the model were made. Three runs were included in the 2003 stock assessment. The base-case model is known as STATc, which was bounded by two models known as STARB1 and STARB2. The updated base-case model estimates that current spawning output is 11% of that expected from an unfished stock. The SSC endorses the STAR Panel's conclusion that this assessment represents the best available science and can form the basis for Council decision-making.

Blackgill rockfish

The SSC reviewed the assessment and STAR Panel report for blackgill rockfish (*Sebastes melanostomus*). The assessment pertains to the stock in the Monterey and Conception INPFC areas, where over 90% of the landings have occurred. Blackgill rockfish extend south into Mexican waters. The assessment is based on catch and length composition data from commercial fisheries and indices of relative abundance and size composition from the AFSC shelf trawl survey and the AFSC slope survey. Estimates of stock size in 2005 ranged from 36% to 67% of mean unfished spawning stock size depending on a plausible range of assumptions for natural mortality, but are highly uncertain due to a lack of assessment data. Assessment results indicate that recent exploitation rates have been slightly below the F_{MSY} proxy for rockfish. The SSC endorses the STAR Panel conclusions that this assessment represents the best available science and can form the basis for Council decision-making.

Kelp Greenling

The SSC reviewed the stock assessment and STAR Panel report for kelp greenling (*Hexagrammos decagrammus*), which was treated as two completely independent sub-stocks divided at the California-Oregon border. There are substantial differences between the two assessments with respect to assessment period, model assumptions, results, and uncertainties. An important difference between the two sub-stocks is the first year for which historical catch data are available (1916 for California and 1981 for Oregon). The Oregon sub-stock has some age-at-length data, which were included in the assessment and provide information on growth and variation in length-at-age. The estimate of relative stock size for the Oregon sub-stock (49% of unfished) is more certain than estimates of absolute abundance, which are highly imprecise. The SSC cautions that yield estimates from the model are very uncertain, but concluded that assessment results from the Oregon sub-stock represent the best available science and can form the basis for Council decision-making, in that region. For the California sub-stock, considerable effort was made to identify a plausible model formulation, but none could be identified. Despite providing a comprehensive summary and synthesis of available biological and fishery information, the SSC concluded that the results for the California sub-stock are inadequate to provide management advice.

August 15-19, 2005 STAR Panel, Seattle, WA – Canary Rockfish, Lingcod, Yelloweye Rockfish, and Yellowtail Rockfish

Canary Rockfish

The SSC reviewed the canary rockfish (*Sebastes pinniger*) assessment document and received a verbal report from the STAR Panel chair. The final STAR Panel report will be available for the November Council meeting.

The previous canary stock assessment was conducted in 2002. The new assessment used the Stock Synthesis 2 model (SS2). It included catch, length- and age-frequency data from 10 fishing fleets, including the trawl, non-trawl, and recreational sectors. The National Marine Fisheries Service (NMFS) triennial bottom trawl survey biomass index, length-frequency data, and age-frequency data were also included. The assessment provided estimates of stock abundance over the period 1916-2005. The principal result from the SS2 model was that the current spawning stock biomass (2005) was 5.3% of that expected in an unfished state (with a 95% confidence interval ranging from 2.7% to 7.9%). Canary rockfish are currently managed under a Council rebuilding plan, and these assessment results indicate that the stock remains in an overfished state with only a modest amount of rebuilding occurring in recent years. The STAR Panel concurred with the principal assessment conclusions, and endorsed the use of the assessment to support management decisions.

However, several technical issues were raised during the SSC's review of the canary assessment. Given the wide-ranging impact of restrictive canary harvest guidelines across many Council-managed groundfish, the SSC recommends that the canary assessment be revisited during the STAR "Mop-up" panel meeting (26-30 September 2005 in Seattle). More specifically, the SSC requests that the stock assessment team consider the following four issues, report on them, and be prepared to conduct additional runs during the "mop-up" meeting.

- (1) The survey catchability (q) estimated in the canary assessment appears to be considerably larger than the q estimated for other rockfishes. The validity of the q estimate should be investigated.
- (2) The assumed variability associated with the spawner-recruit relationship ($\sigma_R=0.4$) is small relative to that used for other rockfish. The sensitivity of the canary assessment results to larger values of σ_R should be explored.
- (3) Documentation more complete than that in the draft assessment document should be provided. Minimally, the updated selectivity curves and the SS2 data and control files should be made available.
- (4) Inclusion of the Santa Cruz juvenile survey data should be considered.

Lingcod

The SSC received a verbal report from the STAR Panel chair. The final STAR Panel report will be available for the November Council meeting. The lingcod (*Ophiodon elongatus*) assessment applies to the full Pacific Fishery Management Council (PFMC) management zone (the US-Vancouver, Columbia, Eureka, Monterey, and Conception INPFC areas). Separate assessment models were constructed to describe population trends in the northern (LCN: US-Vancouver,

Columbia) and southern (LCS: Eureka, Monterey, Conception) areas. Due to issues that could not be resolved during the STAR Panel meeting, both the LCN and LCS assessments will be taken up by the STAR “Mop-up” Panel (26-30 September 2005 in Seattle). The SSC will provide comments on both lingcod assessments at the November Council meeting.

Yelloweye Rockfish Update

The SSC reviewed the yelloweye rockfish (*Sebastes ruberrimus*) assessment document and received a verbal report from the STAR Panel chair. The final STAR Panel report will be available for the November Council meeting.

This assessment updates the status of the yelloweye rockfish resource off the west coast of the United States, from the Mexican border to Canadian border. This stock was treated as a single coastwide population as in the previous assessment conducted in 2002. The new assessment update extended the various data time series (as per the update ‘rules’) but did change the assessment model (using the new Stock Synthesis 2 model). This stock is being managed under a Council rebuilding plan. The assessment results indicate that current spawning stock biomass is 21% of the level expected in the unfished state. Both the STAR Panel and the SSC endorse the assessment update as the best available science and conclude that it can form the basis for Council management decisions.

The SSC notes that it will be especially difficult to monitor rebuilding progress for yelloweye due to the lack of an appropriate abundance index. There are no useful survey indices for yelloweye and the CPUE indices used in the assessment end in 2001 with the onset of restrictive regulations.

Yellowtail Rockfish

The SSC reviewed the yellowtail rockfish (*Sebastes flavidus*) assessment document and received a verbal report from the STAR Panel chair. The final STAR Panel report will be available for the November Council meeting.

The Council manages the U.S. fishery as two stocks separated at Cape Mendocino, California. As in the past, this assessment includes only the population between Cape Mendocino and 49° N. latitude (northern stock). The northern stock is divided into three assessment areas: South Vancouver, Northern Columbia, and Eureka/South Columbia. The northern stock areas were last assessed in 2000, and the assessment was updated in 2003. The new assessment update extended the various data time series and used the same stock assessment model as used in the 2000 full assessment and the 2003 update (i.e. an age-structured model written with AD Model Builder software). Results indicate that although abundance trends are somewhat different by area (little trend in South Vancouver and declining trends in the other areas), current spawning stock biomass is well above the overfished threshold. Both the STAR Panel and the SSC endorse the assessment update as the best available science and conclude that it can form the basis for Council management decisions.

PFMC
09/21/05