

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON CENTRAL
SUBPOPULATION OF NORTHERN ANCHOVY (CSNA)
OVERFISHING LIMIT (OFL) PROCESS

The Coastal Pelagic Species Advisory Subpanel (CPSAS) heard Scientific and Statistical Committee (SSC) discussion on developing a revised OFL for CSNA and a process and timeline to consider OFL alternatives. The CPSAS also reviewed the Agenda Item G.2.a, Joint SSC/CPSMT Report and further reviewed the NOAA Technical Memorandum “Distribution, Biomass and Demography of the Central Stock of Northern Anchovy during Summer 2016, Estimated from Acoustic Trawl Sampling” (Agenda Item G.1.b, Supplemental SWFSC Report).

The CPSAS would appreciate the Council’s consideration of the following points in further deliberating a timeline and potential modifications to anchovy management.

- “...the biomass of the central stock of northern anchovy is extremely variable and this variability occurs with and without a significant fishery on the stock.” (Richard H. Parrish, Agenda Item H.3.b Supp. Public Comment 4, Nov. 2015)
- Due to the extreme variability of anchovy, Dr. Richard Parrish also stated in his November 2015 comment, “*Clearly the biomass variations ... demonstrate that in the central stock of northern anchovy biomass estimates are worth very little for real time management if they are more than one year old.*”
- Fishermen continue to observe and report a very large abundance of anchovy of various sizes (small to large) from northern to southern California. Most of these observations are seen near shore, inside current California Cooperative Oceanic Fisheries Investigations (CalCOFI) and NOAA survey areas. Fishermen presented evidence of this abundance during public testimony at the November 2016 meeting and will do so again today.
- Northern anchovy was assigned to Monitored status at the onset of Amendment 8 because landings for reduction ceased. Catches have remained well below the default ABC/annual catch limit (ACL) catch limit of 25,000 mt since implementation of the CPS Fishery Management Plan in 2000. OFL/maximum sustainable yield (MSY) is intended to reflect the largest average fishing mortality rate that can be harvested over the long term, and management measures should be risk neutral.
- If landings exceeded the 25,000 mt harvest limit, the directed fishery would be closed.
- In a lightly fished, highly dynamic monitored stock like anchovy, OFL should not be based on a single stock assessment.
- Status quo management sets the OFL/MSY at 123,336 mt. This is the lowest of reported estimates of MSY in the SSC / CPSMT report.

- Because anchovy are highly perishable, the fishery takes place in a very small area of the coast close to production facilities in Monterey, Port Hueneme and San Pedro. Markets are limited.

The Council action at this meeting is to provide guidance on the potential process, timeline and alternatives for developing a revised OFL for California anchovy. The SSC / CPSMT Report, as well as SSC meeting discussion, highlighted that any change to the current harvest control framework would require further data and analysis. This could take a year at minimum for Option A, updating the status quo OFL based on Conrad's 1991 analysis, but would likely not change much in terms of management advice. Options B and C and D would take longer because of the need for completion of a methodology review of the Acoustic Trawl Method (ATM) survey and approval of the ATM survey as an appropriate assessment tool, which is scheduled to occur in early 2018. Further, for the ATM survey to be a reliable minimum estimate of total biomass, an inshore correction factor would need to be applied, and inshore surveys have not yet been approved.

SSC discussion also acknowledged the summer 2016 ATM survey that documented a substantial increase in anchovy abundance in their survey area, which is currently limited to the offshore. This, in addition to record numbers of young of the year anchovy observed in the 2015 juvenile rockfish survey, which corroborate fishermen's reports of abundance, and an abundance of eggs now being collected in the ongoing 2017 CalCOFI cruise, provides reassurance that there is no biological crisis demanding immediate action.

A majority of the CPSAS agrees there is no biological point of concern regarding anchovy abundance, but there would be a serious socio-economic point of concern if the small harvest limit now allowed in the CSNA fishery is further restricted. Although landings are usually relatively small, the anchovy fishery is still very important to California's historic wetfish fleet.

It is also important to understand that anchovy biomass variability makes annual assessments impractical. Annual stock assessments would be very expensive and not justified for a fishery that has averaged less than 10,000 mt per year over the past two decades. Short of considerable improvement in survey methodology, a majority of the CPSAS believe no change in the control rule is warranted.

Therefore, a majority of the CPSAS recommend that the Council:

- [1] Recognize recent record anchovy recruitment (2015 and 2016 juvenile rockfish survey).
- [2] Retain the current harvest specifications for the CSNA anchovy fishery, which represent a precautionary average OFL and harvest limit.
- [3] Support expanded surveys into nearshore habitat presently excluded from the current NOAA survey area, as well as the upper water column.
- [4] Continue and improve collecting and processing biological samples to better understand anchovy population dynamics.

Because of its importance to California's historic wetfish industry and the negligible impact on the ecosystem, as shown in recent research such as the Hilborn et al forage fish study, this

anchovy fishery should continue under its current management framework.

Conservation Representative Statement

The CPSAS conservation representative notes that the most recent scientific information on the abundance of the central subpopulation of northern anchovy indicates that, while biomass has increased since 2015, the stock still remains far below the range of stock sizes upon which existing status determination criteria and reference points are based. As the SSC commented in its November 2016 statement, the current OFL is “based on a model using data from a historical period and collected under dramatically different environmental and abundance conditions.” Given that new information is now available that could be utilized for calculating an updated OFL, and consistent with the MSA’s provision that MSY be updated when new scientific information becomes available, and to reflect current environmental and stock conditions, the conservation representative notes that the Council could consider and adopt a new OFL for CSNA in the near term (per Option C in the Joint SSC/CPSMT OFL Report). With respect to longer term management considerations, the conservation representative recommends that the Council initiate development of an updated management framework for CSNA, including minimum stock size threshold and an ecosystem-based harvest control rule with CUTOFF, that accounts for and protects this stock’s crucial role as forage in the California Current Ecosystem. Such a framework would be informed by both an integrated stock assessment, which the conservation representative suggests be prioritized for completion, as well as annual survey-based abundance estimates; it would also enhance the Council’s ability to manage CSNA with far greater responsiveness to best available science and current conditions than the existing default control rule.

PFMC

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