

Comments on CSNA Management and CPS FMP Management Categories

Geoffrey Shester, Ph.D.

April 12, 2019

Concerns with Council's Implementation of CPS FMP "Monitored" Category

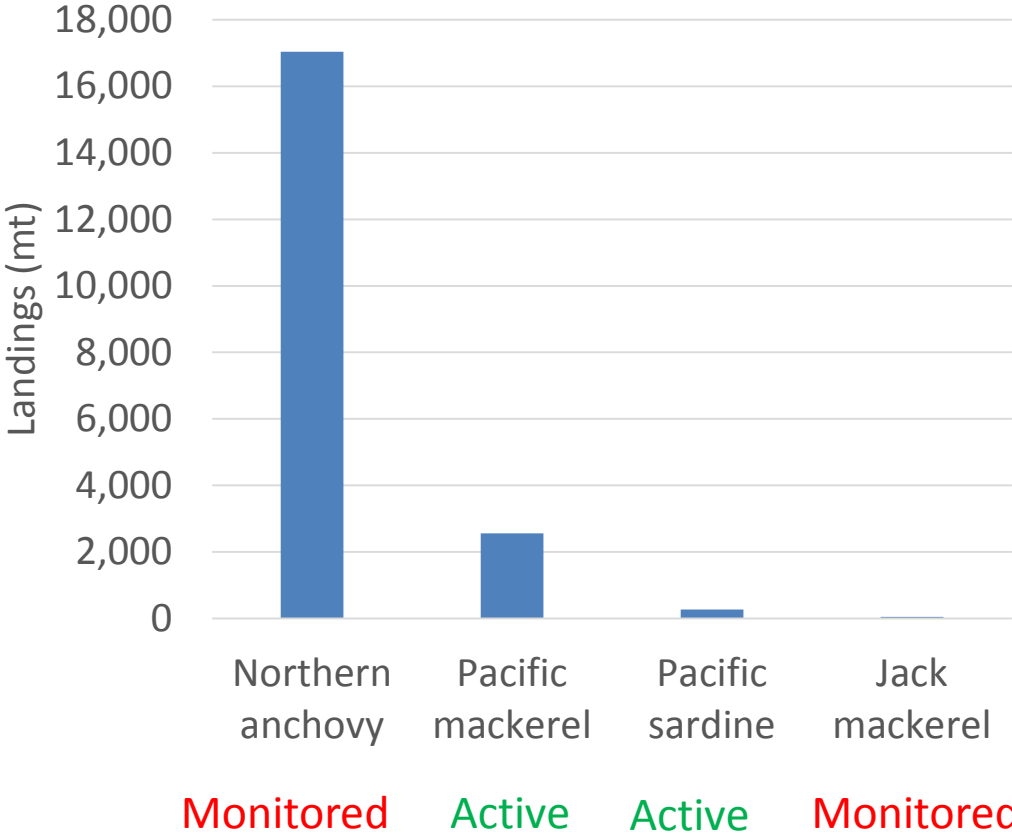
- Not using best available estimates of biomass to inform OFL, ABC, ACLs
- Leads to less data being collected or reviewed
- No way to determine whether stocks are overfished
- Static quotas result in more severe collapse for highly variable stocks (Siple et al. 2018, May 1978)
- 75% ABC buffer is not insufficient to prevent overfishing if stocks can drop by 99% in 2 years
- Not responsive to ecosystem concerns
 - No incorporation of ecological OY factors
 - Mortality events for dependent predators



Current categories do not reflect recent biological removals



California CPS Landings in 2018



Minimum Stock Size Thresholds

- FMPs must contain Status Determination Criteria to determine whether stock is overfished
- NMFS tool is MSSTs
- Must be based on best available science

	MSST in FMP	NMFS (2016) MSST Estimates
Pacific sardine	50,000	61,074 - 121,697
Pacific mackerel	18,200	24,599 - 31,370
CSNA	Not specified	69,049 - 69,781
NSNA	Not specified	Not complete
Jack mackerel	Not specified	272,160

Summary of Requests

- Eliminate active vs. monitored categories from CPS FMP
- Establish a regular specifications cycle for all CPS finfish
- Establish/update minimum stock size thresholds (MSSTs) for all CPS finfish
- Establish new harvest control rule for CSNA using management strategy evaluation



Useful Concepts from Groundfish and HMS Specifications Processes

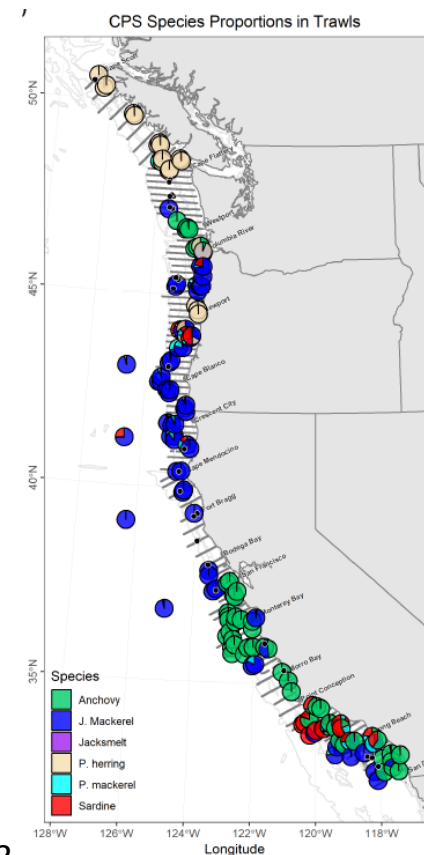
- Single, regular specifications for all stocks in the fishery
- SSC reviews information for all stocks on a clear schedule
- Some catch limits do not change, but opportunity to bring in new data to inform management, determine whether overfished, & formally consider best available science



ATM Methodology Review Report (April 2018):

“The estimates of biomass from the ATM surveys can be used to directly inform management... In the case of northern anchovy there is need to adjust the ATM biomass estimates for the biomass inshore of the survey area, ideally using directed sampling, before the estimates can be used in assessments and management.”

CPS Stock	2017 ATM	2017 nearshore	2018 ATM	2018 nearshore
CSNA	153,460	45,446	723,826	4,110
NSNA	22,709	117	24,419	1,310
Pacific mackerel	41,139	1,105	31,221	1,320
Jack mackerel	128,313	1,543	202,471	9,954
Pacific sardine (NSP)	14,103	146	25,148	309
Pacific sardine (SSP)	N/A	N/A	33,093	1,870



All figures in metric tons. From NMFS 2019. Tech memos SWFSC 610 & 613

A New Framework for CPS

- Regular specification process for all 5 CPS finfish stocks:
 - Set OFLs, ABCs, and ACLs based on annual biomass estimates from surveys (not assessments)
 - Uses pre-determined formulas
 - Minimize time between surveys and specifications
- Periodic Stock Assessments
 - Adjust MSSTs, F_{msy} , Harvest Control Rules

Required NMFS/PFMC Annual Workload:

Current Active vs. Monitored Approach

- 1-2 CPS specs agenda items
- 1-2 CPS ATM surveys
- 1-2 stock assessments
- 1-2 implementing regulations
- 2 species managed

Proposed Annual Management Approach

- 1 CPS specs agenda item
- 1-2 CPS ATM surveys
- 1 stock assessment
- 1 implementing regulation
- 5 species managed



Management Strategy Evaluation for CSNA

- Stakeholder engagement
- Data inputs (ATM surveys, DEPM, aerial survey, other)
- Operating (simulation) model
- Performance metrics (average catch, years with stock below cutoff, risk of depletion, predator impacts)
- Compare alternative harvest control rules

Next Steps

- Initiate an FMP amendment to:
 1. Remove active v. monitored
 2. Establish annual specs framework
 3. Establish harvest control rule for CSNA
 4. Update MSSTs
- Initiate an MSE for CSNA to establish harvest control rule