

NATIONAL MARINE FISHERIES SERVICE REPORT

Mr. Mark Helvey (National Marine Fisheries Service, Southwest Region) will provide the Council a report on recent coastal pelagic species regulatory activities. Dale Sweetnam will give a brief report on the Southwest Fisheries Science Center's research activities.

Council Task:

Discussion.

Reference Materials:

1. Agenda Item G.1.b, NMFS Report.

Agenda Order:

- a. Agenda Item Overview
- b. Regulatory Activities
- c. Fisheries Science Center Activities
- d. Reports and Comments of Advisory Bodies and Management Entities
- e. Public Comment
- f. Council Discussion

Kerry Griffin
Mark Helvey
Dale Sweetnam

PFMC
05/28/14

NATIONAL MARINE FISHERIES SERVICE REPORT ON COASTAL PELAGIC SPECIES

Recent Regulatory Activities

Pacific Sardine Start Date: On February 28, 2014, NMFS issued a final rule to change the starting date of the annual Pacific sardine fishery from January 1 to July 1. This changed the fishing season from one based on the calendar year to one based on a July 1 through the following June 30th schedule. No other changes to the annual allocation structure were made and the existing seasonal allocation percentages remain as specified in the FMP; as do the current quota roll-over provisions (78 FR 11343).

Current Fishery Status:

Pacific Mackerel: 2013-2014 Landings: The Pacific mackerel season began on July 1, 2013 and ends on June 30, 2014. The 2013/ 2014 annual catch limit (ACL) for Pacific mackerel is 52,358 metric tons (mt). The annual catch target (ACT), which is the directed fishing harvest target, is 39,268 mt. If the fishery attains the ACT, NMFS will close the directed fishery, reserving the difference between the ACL and ACT (which is 13,089 mt) as a set aside for incidental landings in other CPS fisheries and other sources of mortality. As of May 21, 2014, approximately 10,100 mt of Pacific mackerel had been landed.

Pacific Sardine: 2014 Interim Harvest Specifications: One April 22, 2014, NMFS published a final rule implementing the 2014 interim Pacific sardine harvest specifications. This included an adjusted initial directed non-tribal harvest allocation for the period of January 1, 2014, to June 30, 2014, of 5,446 mt. This value was reduced from the total period allocation of 6,946 mt for potential harvest by the Quinault Indian Nation of up to 1,000 mt during this period as well as a 500 mt incidental set aside for the non-tribal commercial fishery. On April 21, 2014, the Quinault Indian Nation released 800 mt of their set-aside to be fished by the non-tribal fishery. This increased the amount allocated for the non-tribal directed fishery to 6,246 mt. As of May 21, approximately 5,400 mt of Pacific sardine had been landed during this allocation period.

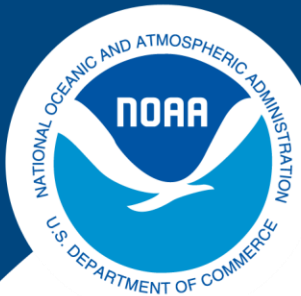


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Agenda Item G.1.c Fisheries Science Center Activities

- Update on the Spring CPS Survey
- Update on Summer SaKe Cruise
- FSV Reuben Lasker Commissioning, May 2, 2014
- Notice of Mexico-US Bilateral Meeting "MexUS-Pacifico"
July 23-25, 2014 Mazatlan, MX
- Programmatic Review of Stock Assessments
July 28-August 1, 2014 La Jolla, CA

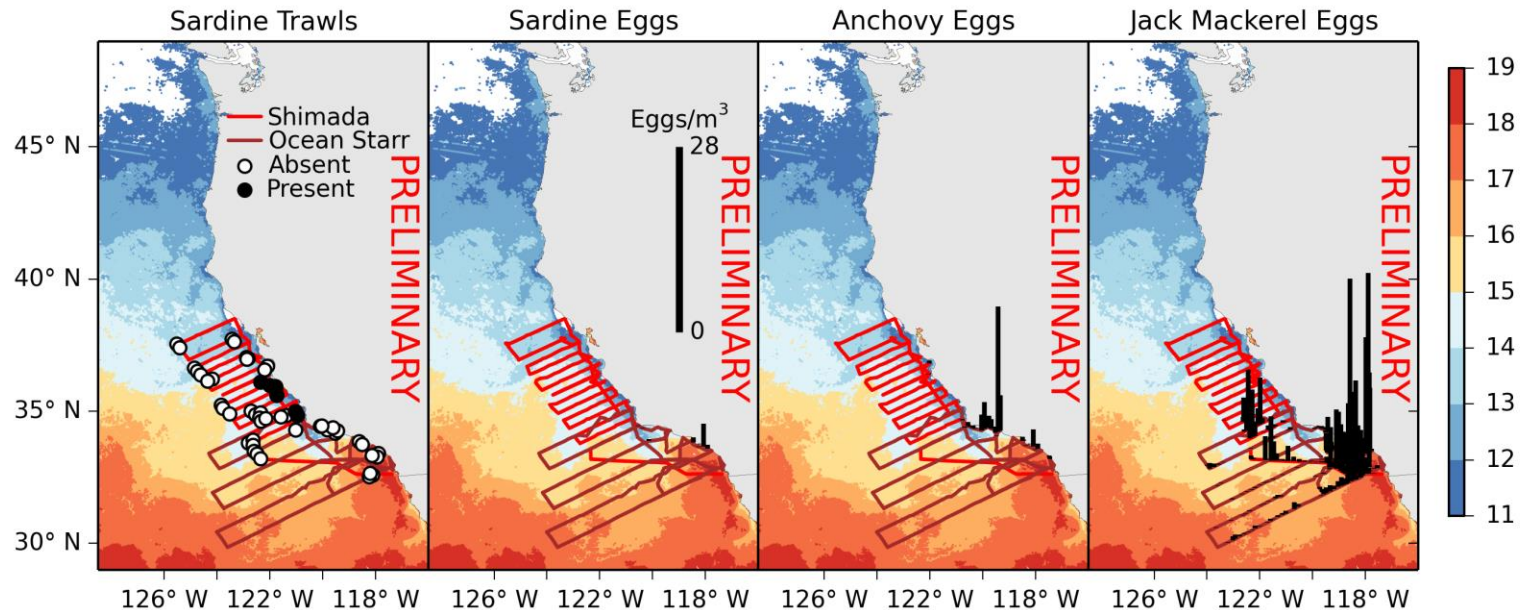
Dale Sweetnam, Fisheries Resources Division
June 23, 2014

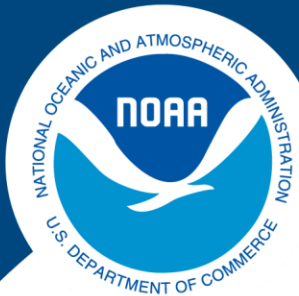


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Agenda Item G.1.c Update on the Spring CPS Survey

**FSV Bell M. Shimada and RV Ocean Starr
28 March to 06 May 2014**

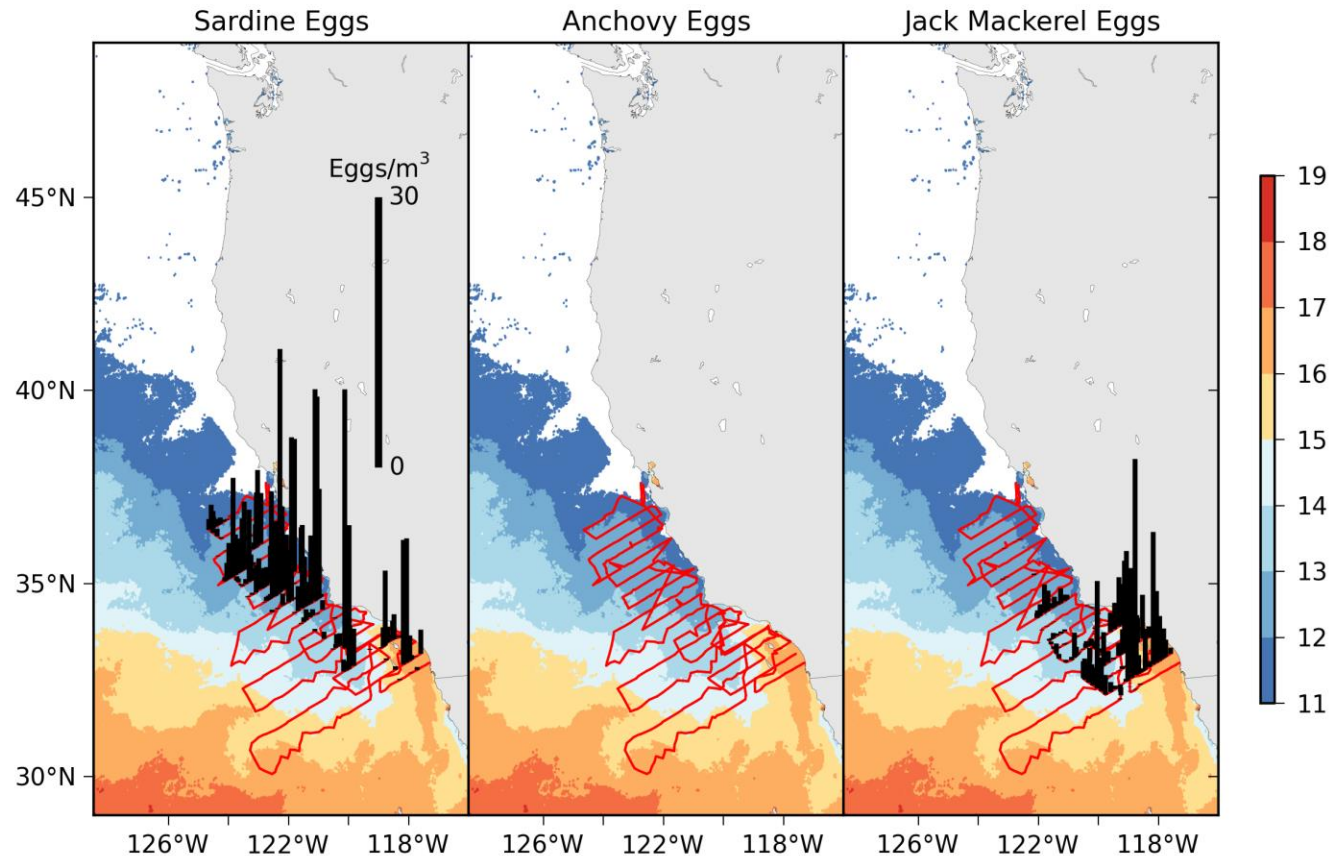


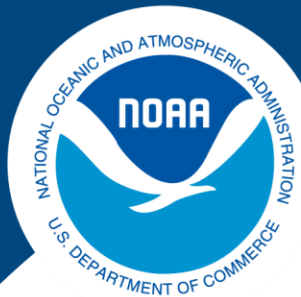


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Agenda Item G.1.c Update on the Spring CPS Survey

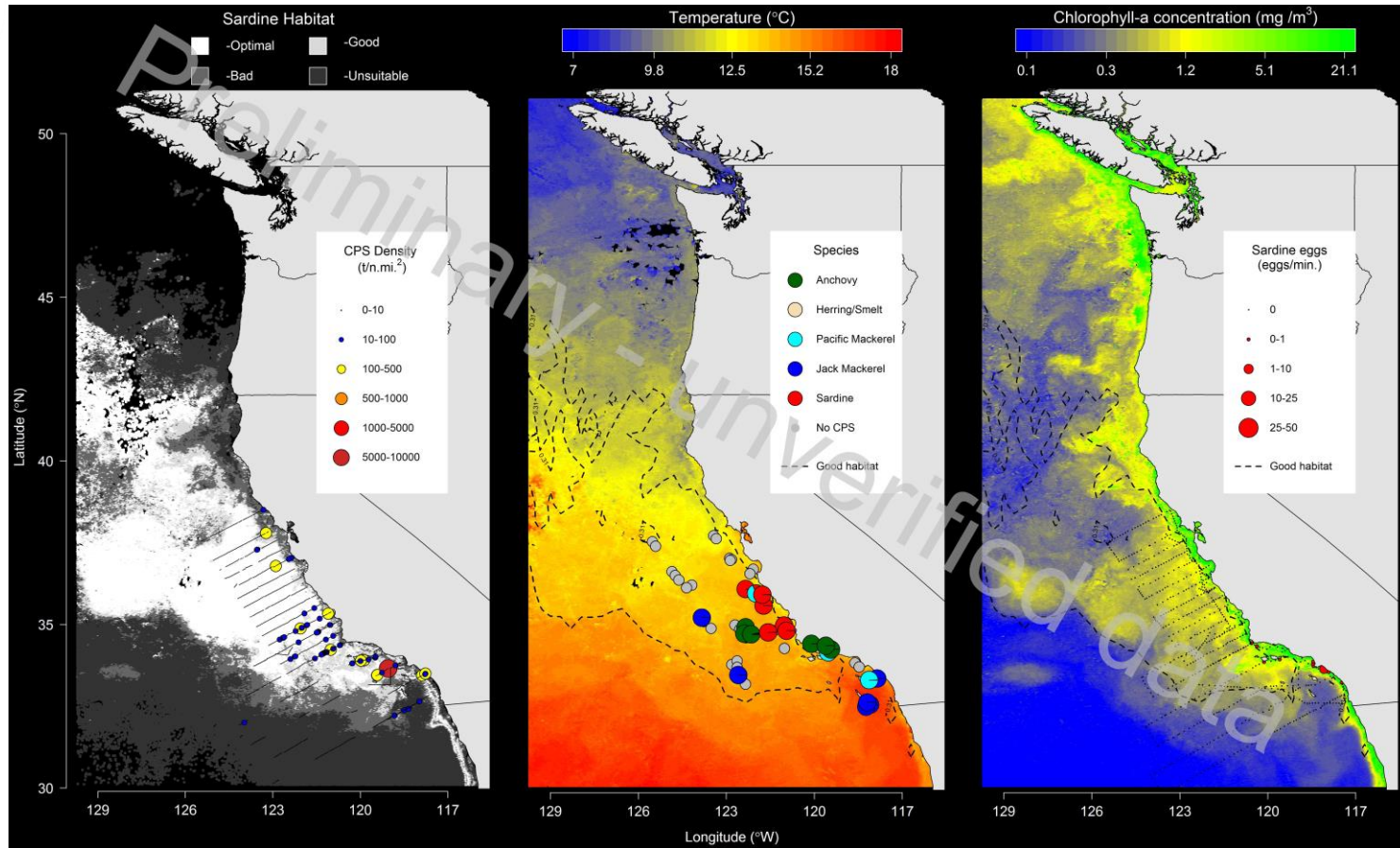
FSV Bell M. Shimada and FSV Ocean Starr
06 April to 03 May 2013

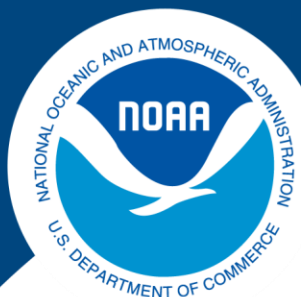




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Agenda Item G.1.c Update on the Spring CPS Survey

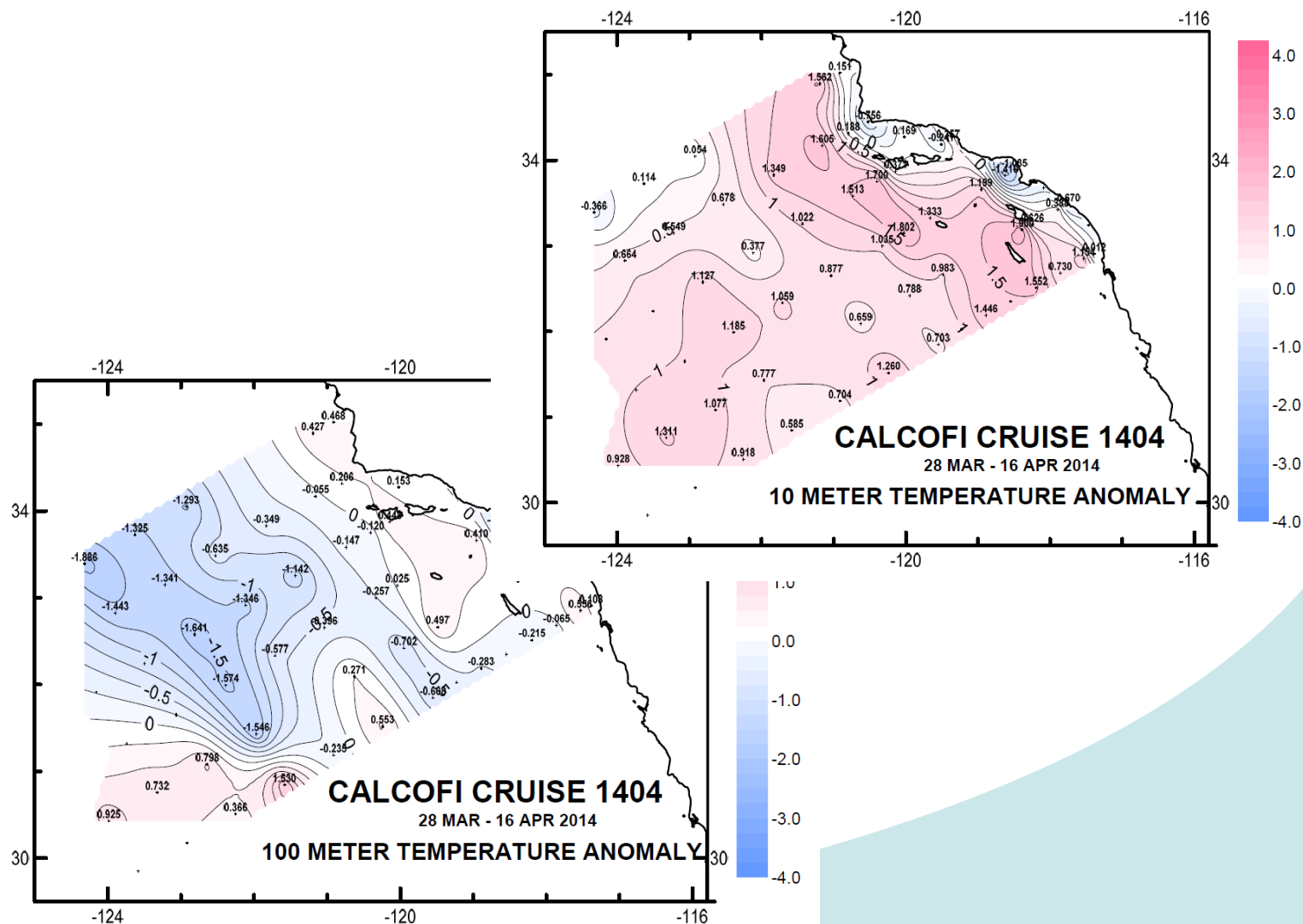


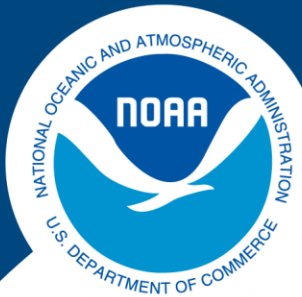


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Agenda Item G.1.c Update on the Spring CPS Survey



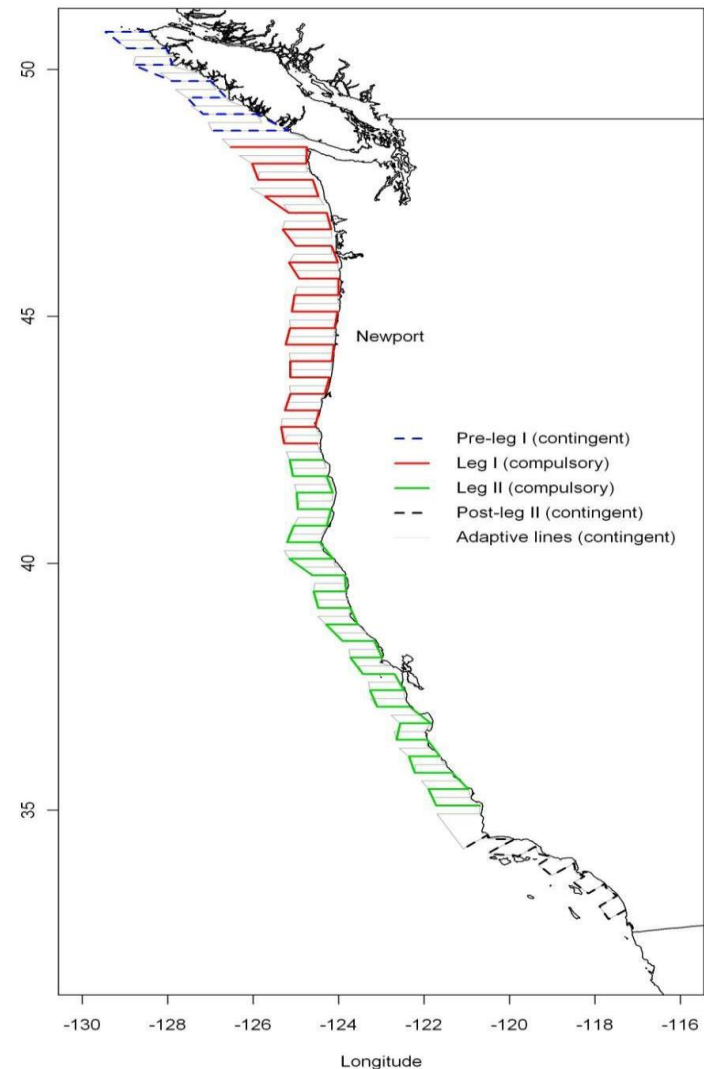


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Agenda Item G.1.c Update on the Summer SaKe Survey

- Survey Dates June 24-September 14, 2014
- First two legs are a Synoptic Acoustic-Trawl survey of CPS in the California Current Ecosystem
- 20 nm spacing of 35 nm grid with adaptive CPS sampling
- Last three legs are hake specific research investigating survey methods, life history, and associated ecosystem





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Agenda Item G.1.c

FSV Reuben Lasker Commissioning

May 2, 2014 Navy Pier San Diego, CA





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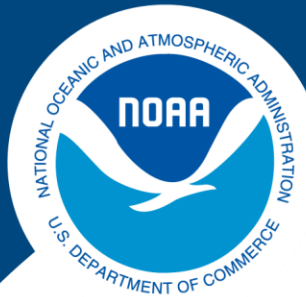
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Agenda Item G.1.c Mexico-US Bilateral Meeting July 23-25, 2014, Mazatlán, MX

MexUS-Pacifico Bilateral Meeting Outcomes - August 2013:

- NOAA and INAPESCA agreed that key personnel for coastal pelagic species will attend the Tri-National Sardine Forum in Ensenada in December 2013, where cooperative planning will include: the acoustic-trawl methods, stock assessments and abundance estimation,
- Both the US and Mexico recognized the importance of acoustic-trawl survey methods as a way of comprehensively studying a variety of coastal pelagic species such as sardine, anchovy and squid, and the value of this method to address questions of forage and ecosystem management,
- NOAA and INAPESCA exchanged information on the two new research ships FSV Reuben Lasker and BIPO-INAPESCA, and agreed to future exchanges of scientific and collaborative joint research.

Agenda Item G.1.c
Programmatic Review of Stock Assessment Process
July 28-August 1, 2014, La Jolla, CA



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- National, 5-year series of programmatic reviews for all Science Centers,
- 2nd year is an independent review of the California Current coastal pelagic, highly migratory, and groundfish stock assessment process done by the SWFSC,
- As in past reviews, the SWFSC will prepare formal responses to the major recommendations of Panel members and develop a set of action items in each area as appropriate,
- Future Science Report to the Council will include an overview of the major themes in the review comments and the Center's response.



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Agenda Item G.1.c
National Standard 2 Update

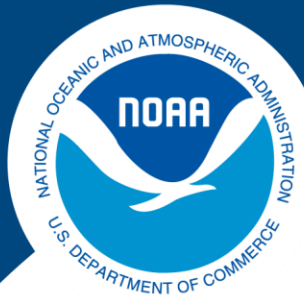
National Standard 2 Update

Cisco Werner

SWFSC

John Stein

NWFSC



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Agenda Item G.1.c National Standard 2 Update

Progress on NS2

We have provided Council Staff with revisions to the assessment and STAR Terms of Reference. We will work with the SSC to revise language in the TORs for methodology reviews. These will not be substantive changes to the process but rather clarification and/or enhancements to reflect compliance with NS2.

We have provided the Council and WCRO the draft Federal Register Notice (FRN) to establish the STAR process as a peer review process under MSA 302 (g)(1)(E). The preamble was drafted by HQ and the the NW and SWFSCs have worked jointly with Council staff on the description of the STAR process. **We are in the process of incorporating Council staff comments and suggestions and finalizing the draft FRN.**

NW/SWFSC are continuing to work with Council staff to identify gaps with current SAFE (Stock Assessment and Fisheries Evaluation) documents. This work is ongoing and an action plan to move toward full compliance is anticipated to be developed jointly by Council staff, WCRO and Centers **later this Fall.**

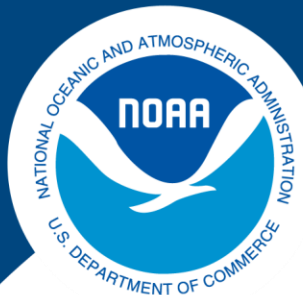
Questions?



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Potential schedule of CPS Stock Assessments

Species	Year					
	2014	2015	2016	2017	2018	2019
Pacific sardine	Full	Up	Full	Up	Full	Up
Other CPS (data preparation - STAR)	X	→	→	→	→	→
Pacific mackerel		Full	→	Pro	→	Full
Northern anchovy - Northern sub		Full	→	Pro	→	Full
Northern anchovy - Central sub			Full	→	Pro	→
Jack mackerel			Full	→	Pro	→
Market Squid	C	C	C	C	C	C
Full CPS Assemblage including Krill					?	?

LEGEND

Full ≡ Full assessment

Up ≡ Update assessment

Pro ≡ Projection assessment

C ≡ Catch assessment (CDFW)

X ≡ To be conducted

→ ≡ Harvest advice based on previous assessment (Full, Up, or Pro)



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Science Center**

Calendar of activities (till next Council meeting)

- CalCOFI Conference, SWFSC, La Jolla Dec 9-11, 2013
 - Symposium: “Forage Species and Assemblages in the California Current System”
- Trinational Sardine Forum, Ensenada, MX, Dec 5-7, 2013
 - Focus issue: “The coastwide structure, distribution and movements of the sardine population”
- NWC/SWC SaKe Survey CIE Review, Jan/Feb 2014
- Pacific sardine STAR and CPS Data Preparation Panel (3-6 March 2014)

PACIFIC MACKEREL HARVEST SPECIFICATIONS AND MANAGEMENT MEASURES FOR 2014-2015

The Pacific Fishery Management Council (Council) will adopt management and harvest specifications for Pacific mackerel, including overfishing limit (OFL), acceptable biological catch (ABC), and annual catch limit (ACL). The Council may also choose to adopt an annual catch target (ACT), as was done for 2013-2014 management. This action will apply to the Pacific mackerel fishing year that begins July 1, 2014 and ends June 30, 2015.

The Southwest Fisheries Science Center produced a catch-only biomass projection estimate (Agenda Item G.2.b, NMFS Report), using the same base model and other parameters in the 2011 full assessment. The projection estimate report also includes additional biomass estimates derived using alternative recruitment assumptions requested by members of the Scientific and Statistical Committee Coastal Pelagic Species Subcommittee.

While commercial and recreational catches still remain far below the current ABC of 52,358 mt, the 2013-2014 fishing year has seen almost double the catch from the prior fishing year. In the prior fishing year, the total catch was 4,969 mt. As of late May, 2014, the total catch in this fishing year was 10,100 mt.

Starting with the 2015-2016 fishing year, the Council will begin setting annual harvest specifications for two years in a row. Based on Council action in June 2013, Pacific mackerel will remain categorized as actively managed, but will see a change in the assessment and management schedule. The new schedule includes full assessments every four years starting in 2015, and catch-only projection estimates every four years starting in 2017.

Council Action:

- 1. Approve the Pacific Mackerel Biomass Projection Estimate and OFL.**
- 2. Adopt harvest specifications, including P*, ABC, ACL and, if appropriate, ACT.**
- 3. Adopt management measures.**

Reference Materials:

1. Agenda Item G.2.b, NMFS Report: Pacific Mackerel Biomass Projection Estimate for USA Management (2014-15).

Agenda Order:

- a. Agenda Item Overview
- b. Pacific Mackerel Biomass Projection
- c. Reports and Comments of Advisory Bodies and Management Entities
- d. Public Comment
- e. **Council Action:** Adopt Biomass Projection, Annual Harvest Specifications, and Management measures for Pacific Mackerel

Kerry Griffin
Kevin Hill

PACIFIC MACKEREL BIOMASS PROJECTION ESTIMATE FOR USA MANAGEMENT (2014-15)

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NOAA / NMFS
Southwest Fisheries Science Center
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Submitted to

Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, Oregon 97220

May 2014

Introduction

Beginning in 2015, the Pacific Fishery Management Council (Council) will begin an assessment/management schedule for Pacific mackerel (*Scomber japonicus*) based on: 1) conducting *full* assessments every four years starting in 2015; 2) conducting catch-only projection estimates every four years starting in 2017; and setting harvest and management guidelines as biennial specifications that serve for two consecutive (fishing) years, starting in 2015. In 2015, a full assessment should be conducted for purposes of providing management advice that serves for two (fishing) years, 2015-16 and 2016-17. In 2017, a catch-only projection estimate should be conducted for informing management for fishing years 2017-18 and 2018-19.

Based on recommendations from the Scientific and Statistical Committee (SSC) and following methods used in last year's Pacific mackerel projection assessment, here we present an extended forecast analysis for providing management advice for the upcoming Pacific mackerel fishing year from July 1, 2014 to June 30, 2015. Sensitivity analysis conducted here was discussed informally with members of the SSC's CPS-Subcommittee prior to preparation of this document.

Methods

Details regarding the assessment model XA, which served as the baseline model for developing all annual management guidelines since 2011, are presented in the stock assessment report (Crone et al. 2011; June 2011 Briefing Book, Agenda Item G.2.b, Attachment 1). The projection model used here was parameterized similarly as last year's projection model that provided biomass estimates for management in 2013-14 (Crone 2013, June 2013 Briefing Book, Agenda Item I.2.b, Attachment 2), and assumes a Tier 2 sigma value of 0.72. Important model information follows, including data, parameterizations, and sensitivity analysis:

- Recent Pacific mackerel landings (catch) are presented in Table 1. In the current projection model, forecast catch estimates were included for fishing years 2011-13 (updated catch estimates in 2013).

- No other data or parameterization changes.
- Sensitivity analysis
 - Estimated biomass and derived management quantities were robust to a wide range of alternative catch time series. For example, substantial increases in total landings assumed in the model had little to no effect on estimates of abundance and stock status, given that present catches have remained at very low levels over an extended timeframe.
 - Results were sensitive to alternative assumptions (model scenarios) regarding recent recruitment success and potential impacts on estimates of overall stock (age 1+ fish) biomass used for advising management (Table 2).
 - ✓ In addition to the default projection (forecast recruitment estimates were based on stock-recruitment relationship), three recent recruitment scenarios were evaluated, i.e., assuming forecast recruitment is equal to: 1) the recent average estimated recruitment (2008-10); the historical 3-year (running) low estimated recruitment (1997-00); and the lower bound of the 95% CI associated with the estimated recruitment in the terminal year (2010) of the main period of the default projection model.
 - ✓ Recruitment (age 0-1 yr-old fish) adjustments and subsequent biomass estimation were performed external to the model based on straightforward re-calculations of estimated numbers-at-age from the default projection model, according to the assumed recruitment level and accounting for losses due to natural mortality. That is, recruitment uncertainty was not evaluated internally within the projection model, given inherent constraints in Stock Synthesis regarding changes to recruitment deviations for the forecast vs main periods of the model and subsequently, structural changes to baseline files (catch time series) that would be needed to similarly address the three recruitment scenarios above. Finally, both external and internal recruitment-related adjustments are based on generally similar approaches and expected to produce comparable results.
 - ✓ Estimates of stock (age 1+ fish) biomass generated from the four model scenarios are presented in Figure 1.
- Expectedly, assumptions of depressed recruitment over the last few years resulted in substantial decreases in model estimates of absolute abundance of Pacific mackerel and associated yields to the fisheries. In general, the alternative recruitment success assumptions reflected reductions of roughly one-half to two-thirds of that indicated from the default projection model, depending on the model scenario of interest (Table 2).

Table 1. Pacific mackerel landings (mt) for fishing years 2009 to 2013 (i.e., through June 2014). Recent catch estimates for Ensenada (ENS) in calendar year 2013 are unconfirmed at this time, but not likely to change significantly when final statistics become available. Total commercial and recreational landings were used in the projection model.

Fishing year (July-June)	USA Com.	ENS Com.	Total Com.	Rec.
2009	3,009.7	0.2	3,009.9	268.7
2010	2,085.7	1,604.7	3,690.4	216.6
2011	1,855.4	1,150.8	3,006.1	127.0
2012	4,752.6	116.7	4,869.2	100.2
2013	8,494.7	957.4	9,452.1	109.7

Table 2. Pacific mackerel harvest control rules (HCR) for the 2014-15 fishing year based on alternative assumptions (model scenarios) of recent recruitment success. Default S-R = stock-recruitment (Beverton-Holt) relationship; Avg = average recruitment (2008-10 and 1997-00); and 95% CI = lower 95% CI for 2010 recruitment estimate.

Harvest Control Rule Formulas				
OFL = BIOMASS * E_{MSY} * DISTRIBUTION				
$ABC_{P\text{-}star} = BIOMASS * BUFFER_{P\text{-}star} * E_{MSY} * DISTRIBUTION$				
$HG = (BIOMASS - CUTOFF) * FRACTION * DISTRIBUTION$				

HCR Parameters	Default S-R Rec	Avg Rec 2008-10	Avg Rec 1997-00	Lower 95% CI Rec
P-star	0.45	0.45	0.45	0.45
ABC Buffer for Tier 2 $P_{star0.45}$	0.9135	0.9135	0.9135	0.9135
FRACTION	0.3	0.3	0.3	0.3
CUTOFF (mt)	18,200	18,200	18,200	18,200
DISTRIBUTION (U.S.)	0.7	0.7	0.7	0.7
BIOMASS (ages 1+, mt)	304,184	157,106	122,489	120,625

HCR Values (MT)	Default S-R Rec	Avg Rec 2008-2010	Avg Rec 1997-2000	Lower 95% CI Rec
OFL =	63,879	32,992	25,723	25,331
ABC =	58,353	30,138	23,498	23,140
HG =	60,057	29,170	21,901	21,509

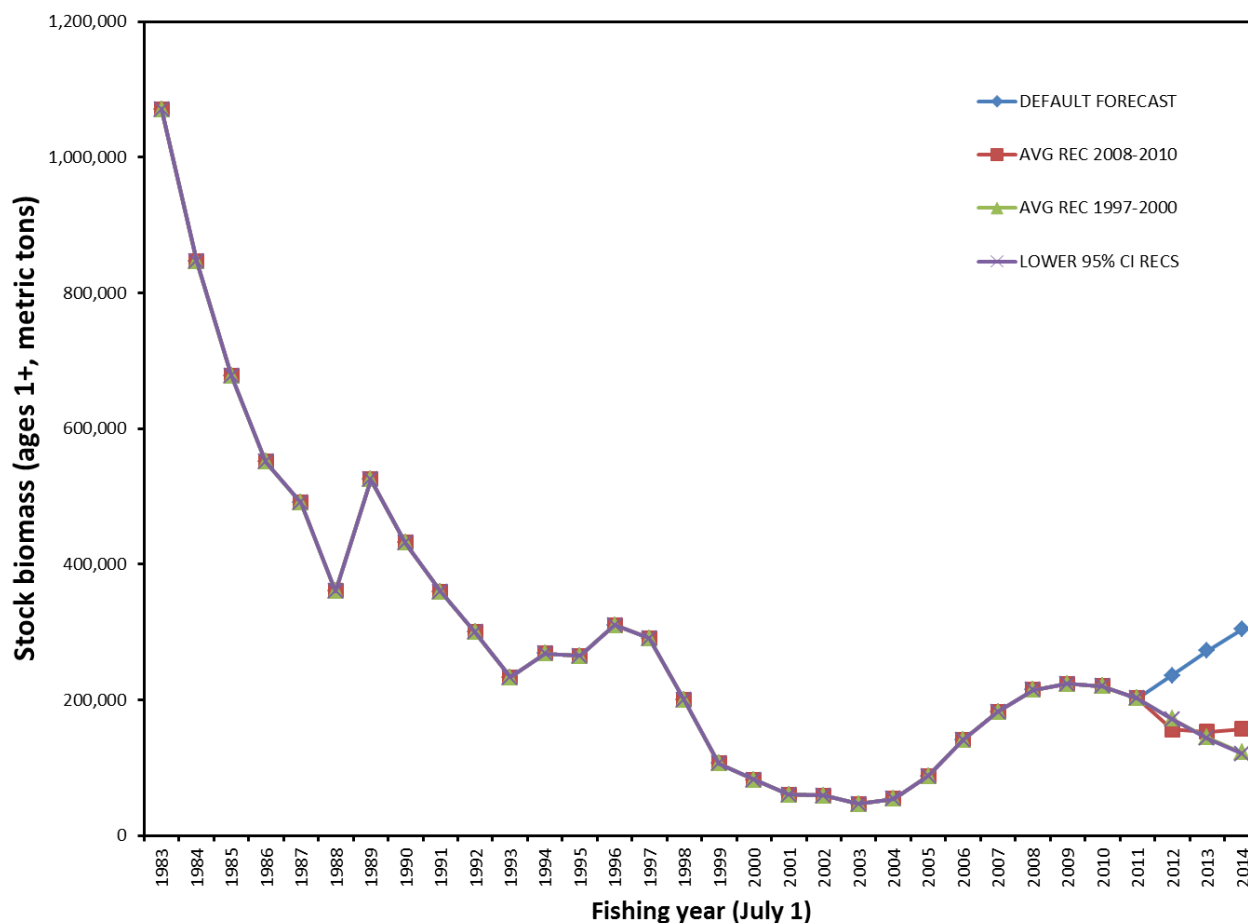
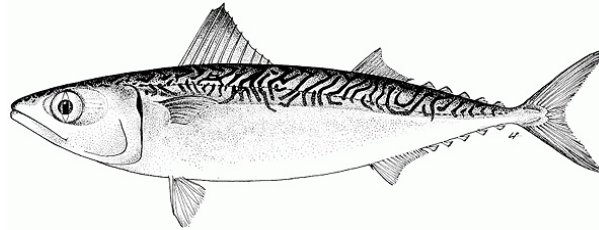


Figure 1. Pacific mackerel stock biomass time series for alternative assumptions (model scenarios) regarding recent recruitment success.



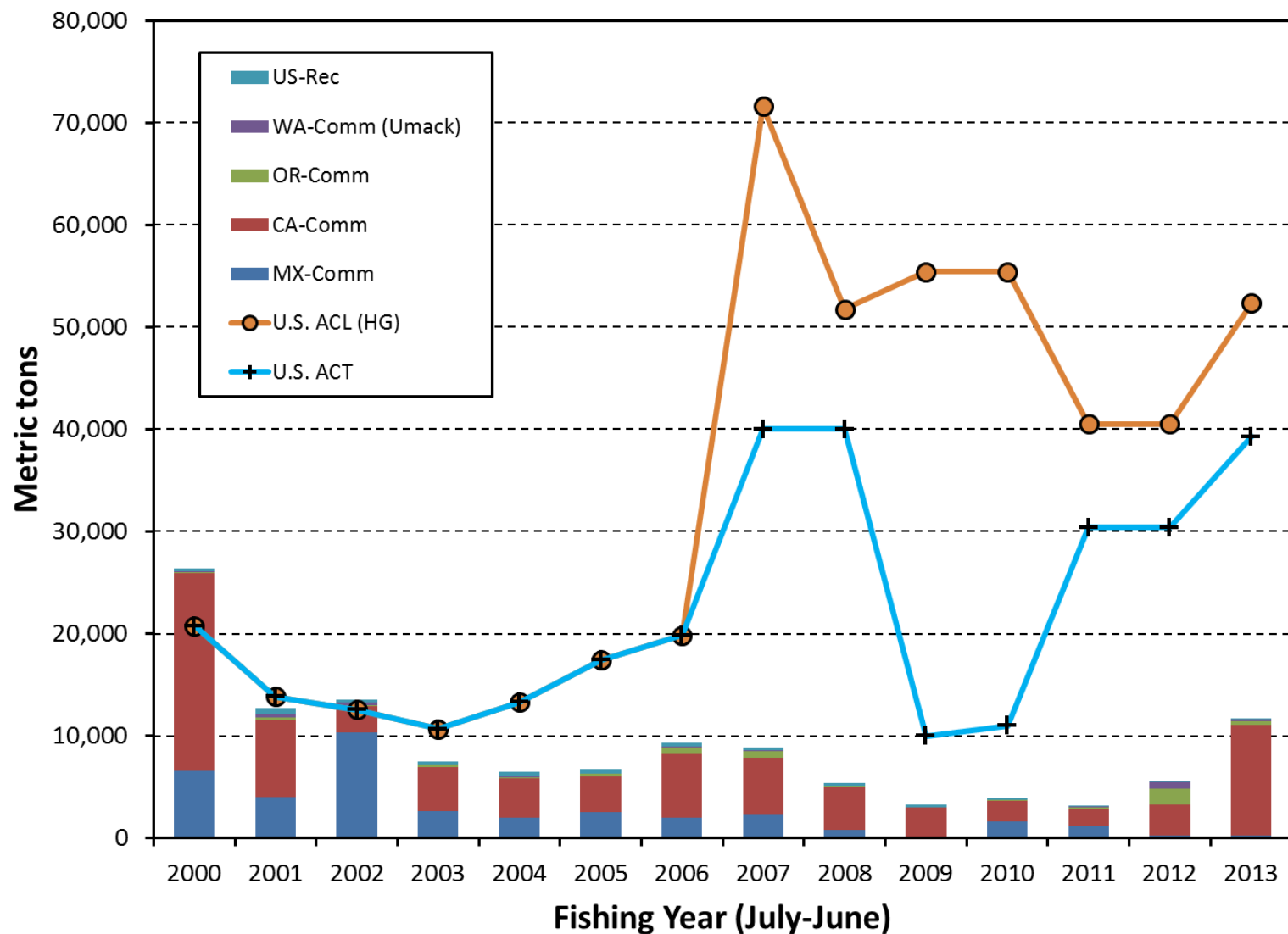
Pacific Mackerel Biomass Projection Estimate for USA Management in 2014-15



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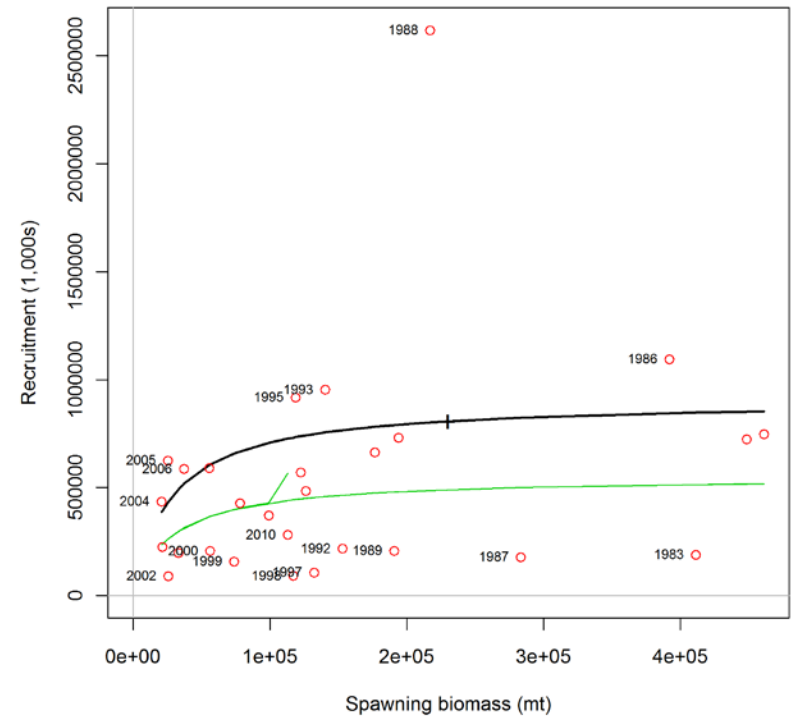
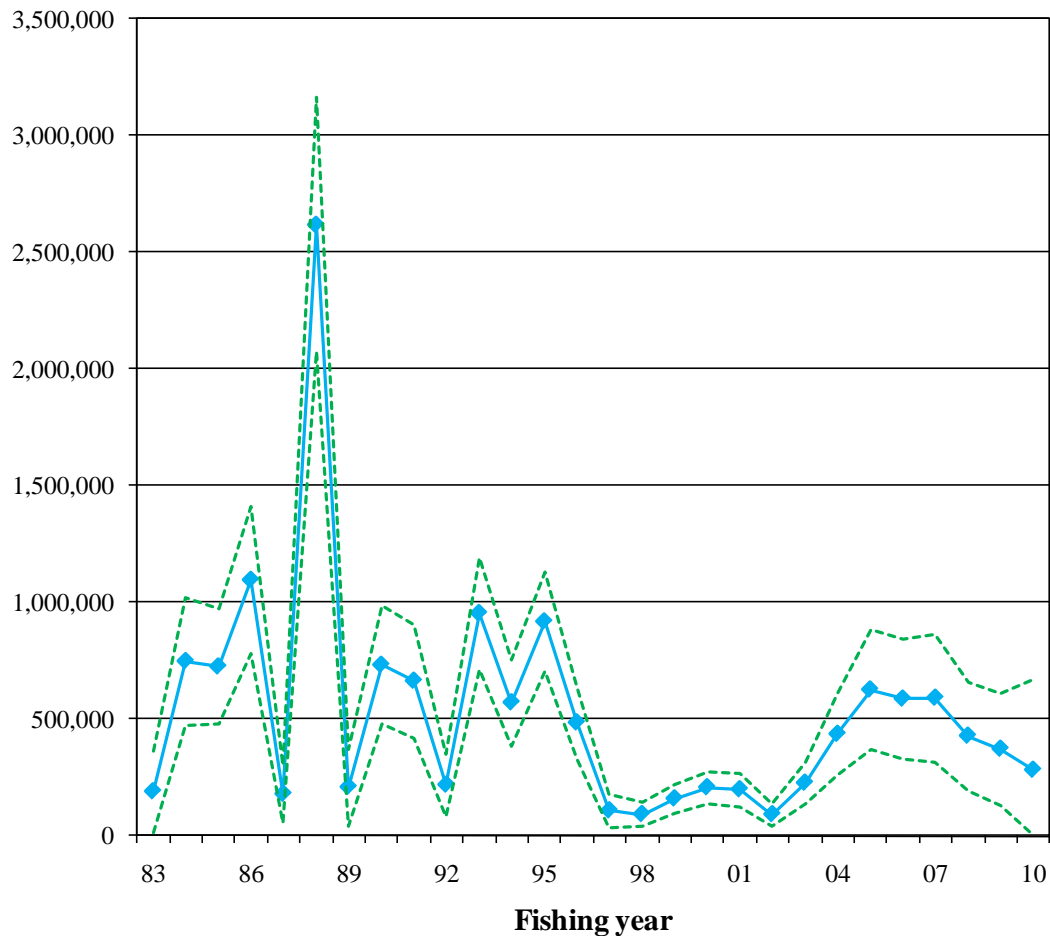
Pacific Mackerel Management & Landings





Estimated Recruitment Time Series (2011 Assessment Model XA)

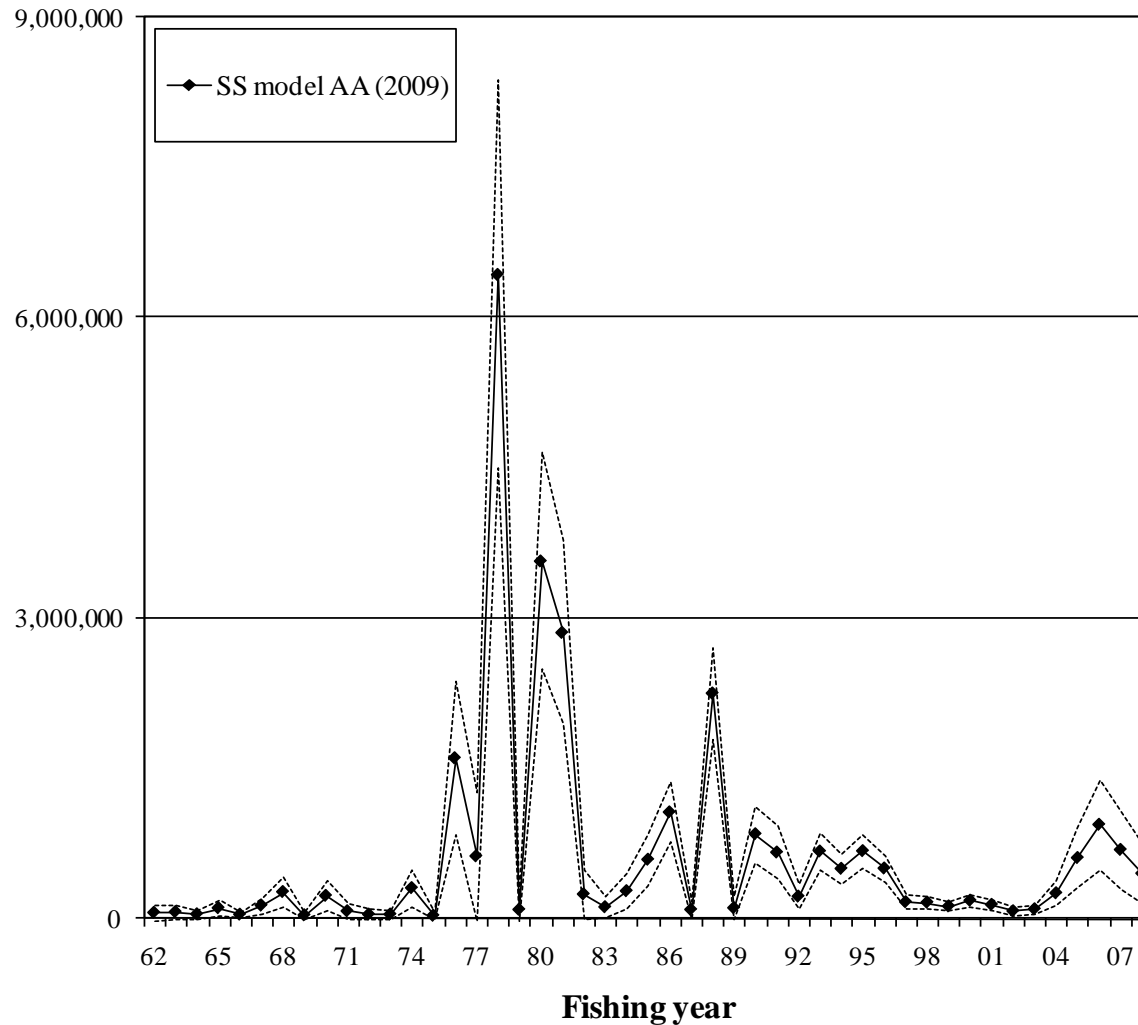
R (1,000s of fish)





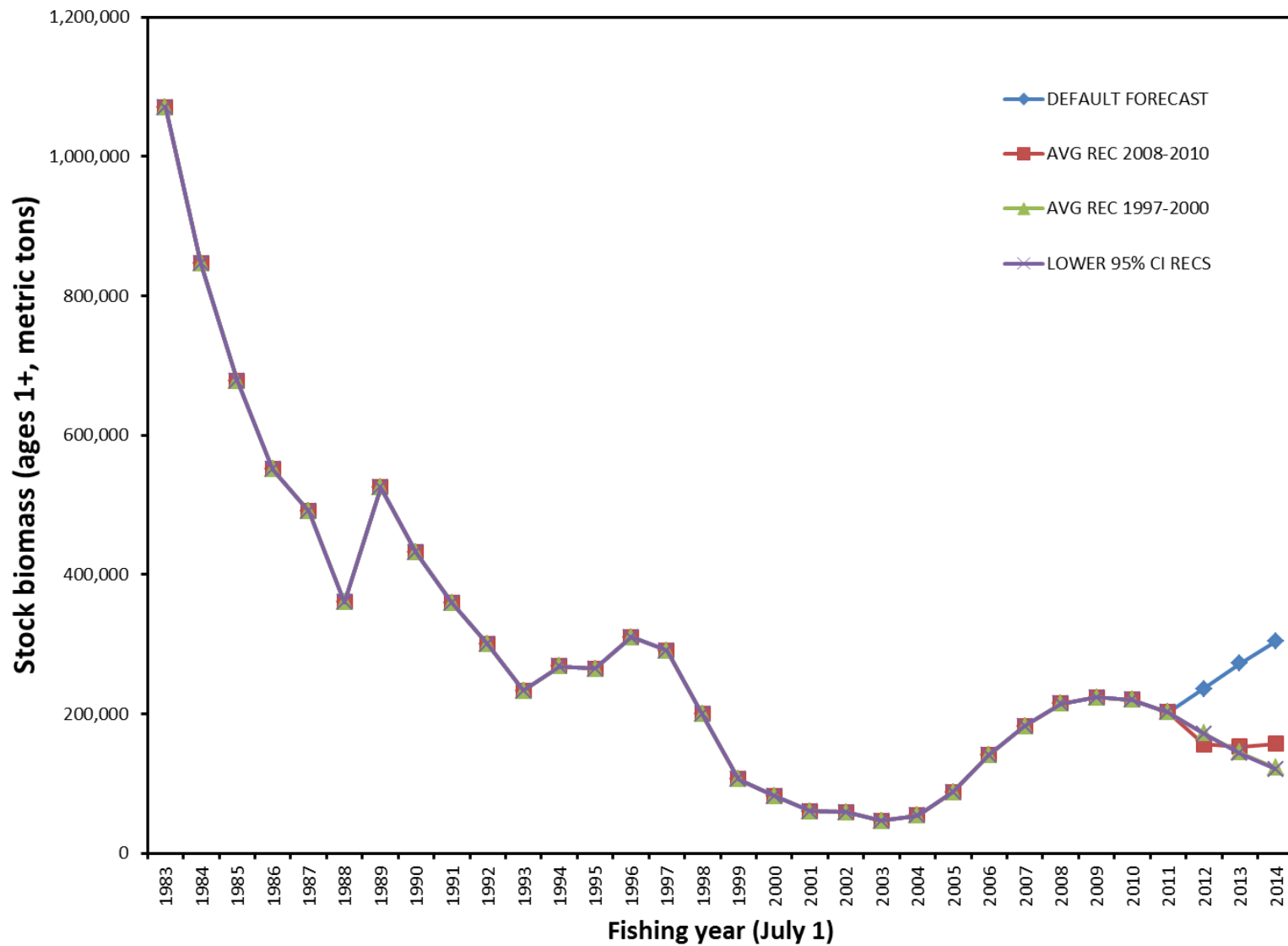
Estimated Recruitment Time Series (2009 Assessment Model AA)

R (1,000s of fish)





Estimated Biomass Time Series – 2011 & 2014





Harvest Control Rules - 2014 Projection Model

Harvest Control Rule Formulas				
OFL = BIOMASS * E _{MSY} * DISTRIBUTION				
ABC _{p-star} = BIOMASS * BUFFER _{p-star} * E _{MSY} * DISTRIBUTION				
HG = (BIOMASS - CUTOFF) * FRACTION * DISTRIBUTION				

HCR Parameters	Default S-R Rec	Avg Rec 2008-10	Avg Rec 1997-00	Lower 95% CI Rec
P-star	0.45	0.45	0.45	0.45
ABC Buffer for Tier 2 Pstar _{0.45}	0.9135	0.9135	0.9135	0.9135
FRACTION	0.3	0.3	0.3	0.3
CUTOFF (mt)	18,200	18,200	18,200	18,200
DISTRIBUTION (U.S.)	0.7	0.7	0.7	0.7
BIOMASS (ages 1+, mt)	304,184	157,106	122,489	120,625

HCR Values (MT)	Default S-R Rec	Avg Rec 2008-2010	Avg Rec 1997-2000	Lower 95% CI Rec
OFL =	63,879	32,992	25,723	25,331
ABC =	58,353	30,138	23,498	23,140
HG =	60,057	29,170	21,901	21,509

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON PACIFIC MACKEREL HARVEST SPECIFICATIONS AND MANAGEMENT MEASURES FOR 2014-2015

The Coastal Pelagic Species Advisory Subpanel (CPSAS), in joint session with the CPS Management Team (CPSMT), heard a presentation by Dr. Kevin Hill, reviewing the catch-only biomass projection estimate for Pacific mackerel for management in the 2014-15 fishing year (Agenda Item G.2.b. NMFS Report). Dr. Hill presented the default projection based on the 2011 Pacific mackerel assessment model XA, and several sensitivity runs requested by the Scientific and Statistical Committee (SSC) to reflect uncertainty in recruitment projections. The assessment also included projected harvest control rule scenarios for Pacific mackerel for the 2014-15 fishing year, based on the default model projection and three alternative model scenarios.

In discussion it was noted that the SSC did not endorse the default projection, which would result in a 60,057 mt harvest guideline (HG). Instead, the SSC recommended a model scenario based on average recruitment in 2008-2010, which reduces the HG to 29,170 mt. This reflects more than a 50 percent reduction and is also a 22,830 mt decrease from the 2013-2014 HG.

The CPSAS is very concerned that this catch-only projection, which only includes data through 2010, substantially decreases harvest opportunity at a time when Pacific mackerel are increasing in the fishery. As we commented last year, the Pacific mackerel resource is subject to periodic large increases in biomass and landings, as occurred in 2000-2001. Ocean conditions are changing and are now favorable for mackerel. It is particularly important to maintain the option to harvest Pacific mackerel when the harvest opportunity for other CPS fisheries may be on the decline. The industry is now facing a difficult decision on how much to allocate for directed fishing and how much to set aside for incidental catches in other fisheries. Incidental catch of Pacific mackerel is occurring in virtually all CPS catches.

This troublesome situation highlights the need for further flexibility in the Terms of Reference for stock assessments to address recruitment. This should reflect best scientific practices to include new data during projection and update assessments. Further, the Council should consider upgrading catch-only projections to a more robust form of assessment when increased catches warrant it.

Harvest and Management Specifications

(1) The CPSAS supports the CPSMT recommendations of an acceptable biological catch (ABC) and annual catch limit (ACL) equal to 30,138 mt (based on a CPSMT-recommended P^* of 0.45), and HG set equal to 29,170 mt. The CPSAS recommends an incidental set-aside of 5,000 mt (17 percent) resulting in an annual catch target (ACT) of 24,170 mt.

(2) Should the directed fishery reach the ACT (24,170 mt) and shift to an incidental catch-only fishery, the CPSAS recommends a 45 percent incidental landing allowance of mackerel in other CPS fisheries. In addition, 1 mt of Pacific mackerel may be landed without any other CPS.

(3) The CPSAS recommends an in-season review of the 2014-2015 Pacific mackerel fishery at the March 2015 Council meeting, if needed, to consider releasing a portion of the incidental set-aside to the directed fishery.

Table 1. Pacific Mackerel Harvest Formulas	MT
Biomass	157,106
$OFL = \text{Biomass} * F_{msy} * \text{Distribution}$	32,992
$ABC_{0.45} = \text{Biomass} * \text{Buffer}_{0.45} * F_{msy} * \text{Distribution}$	30,138
ACL	30,138
$HG = (\text{Biomass} - \text{Cutoff}) * \text{Fraction} * \text{Distribution}$	29,170
$ACT = (HG - \text{incidental set aside})$	24,170
Incidental set-aside	5,000

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COASTAL PELAGIC SPECIES MANAGEMENT TEAM REPORT ON
PACIFIC MACKEREL HARVEST SPECIFICATIONS AND MANAGEMENT MEASURES FOR
2014-2015

The Coastal Pelagic Species Management Team (CPSMT) heard a presentation by Dr. Kevin Hill on the catch-only biomass projection estimate for Pacific mackerel, to inform management for the 2014-2015 fishing year (Agenda item G.2.b, NMFS Report). The projection estimate is based on the 2011 full stock assessment, which has now been used for four consecutive management cycles. Catch-only projections were conducted in 2013 and 2014.

In June 2013, the Council established a Pacific mackerel management and assessment schedule such that full stock assessments will be conducted every four years, starting in 2015, and catch-only projection estimates will be conducted every four years, starting in 2017. The Council also directed that annual harvest measures be implemented on a biennial basis beginning with the 2015-2016 fishing year. Thus, the 2014-2015 season is the last season of harvest specifications before the new management regime and the next full stock assessment.

Harvest and Management Specifications

For use in the 2014-2015 fishing year, the Scientific and Statistical Committee has identified the biomass estimate presented in agenda item G.2.b (NMFS Report), based on the average recruitment from 2008-2010, as a risk neutral approach, resulting in an estimated biomass of 157,106 mt (Table 1). Accordingly, the CPSMT makes the following recommendations:

- (1) establish an overfishing limit (OFL) of 32,992 mt; a P^* value of 0.45; an acceptable biological catch (ABC) and annual catch limit (ACL) equal to 30,138 mt; and a resulting harvest guideline (HG) of 29,170 mt. The CPSMT concurs with the CPSAS recommendation to have an incidental set-aside of 5,000 mt, resulting in an annual catch target (ACT) of 24,170 mt.
- (2) should the directed fishery realize the ACT (24,170 mt), the CPSMT recommends that the National Marine Fisheries Service (NMFS) close the directed fishery and shift to an incidental fishery only, with a 45 percent incidental landing allowance when Pacific mackerel are landed with other coastal pelagic species (CPS), with the exception that up to 1 mt of Pacific mackerel could be landed without landing any other CPS.

Table 1. Pacific Mackerel Harvest Values	MT
Biomass	157,106
$OFL = \text{Biomass} * F_{msy} * \text{Distribution}$	32,992
$ABC_{0.45} = \text{Biomass} * \text{Buffer}_{0.45} * F_{msy} * \text{Dist.}$	30,138
ACL	30,138
$HG = (\text{Biomass} - \text{Cutoff}) * \text{Fraction} * \text{Dist.}$	29,170
$ACT = (HG - \text{incidental set aside})$	24,170
Incidental set-aside	5,000

Table 2 includes ABC values based on alternative P* choices.

Table 2. Range of ABC Values	MT
Biomass	157,106
ABC _{0.45}	30,138
ABC _{0.40}	27,491
ABC _{0.30}	22,617
ABC _{0.20}	17,999
HG	29,170

PFMC

06/23/14

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
PACIFIC MACKEREL HARVEST SPECIFICATIONS AND MANAGEMENT MEASURES
FOR 2014-2015

The Scientific and Statistical Committee (SSC) reviewed a report prepared by the Southwest Fisheries Science Center (Agenda Item G.2.b, NMFS Report). The report provides a set of catch-only biomass projection estimates for Pacific mackerel for the purpose of deriving harvest specifications for the fishing year that begins July 1, 2014 and ends June 30, 2015.

All of the biomass projections use the same base model and other parameters in the most recent 2011 full assessment; however, they differ in their assumptions of recent recruitment. The default projection derives recruitments directly from the Beverton-Holt Spawner-Recruit curve. Three additional projections, requested by the SSC Coastal Pelagic Species subcommittee, were also reported to examine sensitivity.

The SSC discussed the biomass projections provided in the report and also reviewed the Spawner-Recruit relationship and the pattern of historical and recent recruitments as reported in the 2011 full assessment. The SSC notes that there is evidence of auto-correlation in the historical recruitment time series, which could potentially cause a bias in the default biomass projection. For this reason, the SSC concludes that using the biomass projection derived from the mean of 2008-2010 recruitment deviations (in lieu of the default projection) is a risk-neutral approach to obtain harvest specifications. This results in a biomass estimate of 157,106 mt.

The SSC recommends an overfishing limit of 32,992 mt. Since Pacific mackerel is a short-lived stock and the most recent full assessment is dated, the SSC recommends carrying forward the Category 2 sigma classification (0.72) for deriving harvest specifications in 2014-2015.