

COASTAL PELAGIC SPECIES MANAGEMENT TEAM REPORT ON COASTAL PELAGIC SPECIES FISHERY MANAGEMENT PLAN MANAGEMENT CATEGORIES

Beginning November 2018, the Pacific Fishery Management Council (Council) embarked on a process to consider removing the concept of categorizing CPS management unit species, specifically the nomenclature of “Active” and “Monitored” (November 2018 Council Meeting Agenda Item E.5.a, [CPSMT Report 1](#)). This action was prompted by a perceived lack of clarity regarding the meaning and use of the “Active” and “Monitored” stock management categories within the Coastal Pelagic Species Fishery Management Plan (CPS FMP). Subsequently, the Council directed the Coastal Pelagic Species Management Team (CPSMT) to prepare draft revisions to the CPS FMP in a manner that retains the management approaches for the CPS management unit stocks and describes how each stock is managed in a stock-specific manner, rather than through use of a categorical assignments (June 2019 Council Meeting Agenda Item F.4). Specifically, the intent was to remove references to the named management categories, but not to revise the manner in which the CPS stocks are managed.

Background - CPS Management Categories

The CPS FMP implemented the use of Management Categories with Amendment 8. Originally, the categories included “Active” (or Actively) and “Monitored” with “Prohibited Harvest” added under Amendment 12 when krill species were incorporated into the FMP. The primary function of the Active and Monitored management categories has been to use available agency and Council resources in the most efficient and effective manner, recognizing that not all CPS stocks require intensive management, e.g., frequent assessment and changes to harvest levels. Typically, Active management category stocks have been assessed on a regular, scheduled basis with annual harvest specifications because these stocks support intensive fisheries, necessitating this type of management approach. In contrast, long-term conservative harvest strategies have been deemed sufficient for the conservation and management of Monitored stocks, in part because these stocks are relatively lightly fished and generally require less intensive harvest management. The category designations have not relieved stocks from the requirements of Magnuson-Stevens Act (MSA) or National Standard (NS) 1 guidelines. Nor have they characterized the type of stock assessment or scientific information available to inform assessments, or *strictly* prescribed the frequency of assessment or harvest policy specification.

Proposed FMP Revisions to Remove Management Categories

The proposed draft FMP language removes management category nomenclature and eliminates the concept of categorical species assignment of CPS as “Active,” “Monitored,” or “Prohibited” while retaining the types of management approaches by which CPS may be managed. Removal of the categorical “boxes” does not alter current harvest policy, stock assessment priority and frequency, and the frequency for harvest management specifications remain unchanged for all stocks in the proposed text. Under the proposed revisions the Council maintains the ability to make changes and establish management procedures on a stock-by-stock basis. The revisions also maintain the Council’s ability to make changes and to establish management procedures tailored to each stock without an FMP amendment. We refer to this action as Amendment 19, although the actual Amendment number may be different.

Section by Section Summary of Changes

The CPSMT notes that in removing the categorical designations, ancillary changes were necessary because the concept of categories was enmeshed in the description of CPS management processes and procedures in the FMP. The proposed changes do not alter management or harvest control rules of any individual stock or management processes.

Also included are a few minor housekeeping changes. The CPSMT proposes a separate administrative action to accomplish other housekeeping needs that have been identified previously. The CPSMT is prepared to bring a draft version at a future Council meeting.

The full suite of proposed revisions is presented as a strikethrough/underline version of the FMP attached to this report. To facilitate review, the substantive and ancillary changes, plus housekeeping are summarized below for each section subject to potential revision. Many of the proposed edits involve replacing the terms “Active” and “Monitored” with their descriptions. The summary notes where these changes are located but does not provide the exact replacement language for each instance. Provided here is an example of how the term “Active” has been replaced.

“Active is for stocks and fisheries with biologically significant levels of catch, or biological, or socio-economic considerations requiring relatively intense harvest management procedures...”

is replaced by text such as,

“CPS stocks and fisheries with biologically significant catch, or biological or socio-economic considerations requiring relatively intense harvest management procedures...”

Similarly, the “Monitored” term is replaced with its description where necessary.

Table of Contents (not included in the attached FMP text)

- Section 1.3 retitled from *Categories of Management* to *CPS Management*
- Section 4.6.4 retitled from *Monitored Stocks* to *Harvest Control Rules for Northern Anchovy, Jack Mackerel, and Market Squid*

Introduction

- Updated to include description of Amendment 19, i.e., the proposed action to remove management categories.

1.2.1 Fishery Management Unit

This section identifies the species subject to the CPS FMP.

- Section title changed from “Fishery Management Unit” to “Management Unit Species”.
- New text clarifies listed management unit species are “in the fishery” and describes that the CPS FMP has two general categories or groups of species, i.e., those that are subject to harvest and a Prohibited Harvest Species.

1.3 Categories of Management

This section describes the general management approaches for CPS.

- Section retitled from *Categories of Management* to *CPS Management*
- Deleted category nomenclature

Category names are deleted while retaining the concept and purpose of managing species/stocks that are subject to harvest according to need by describing general management approaches the Council may use.

1.5 Operational Definitions of Terms

- Deleted the definitions for “Actively Managed Species” and “Monitored species.”
- Refined the definition of “Prohibited Harvest Species” to remove the categorical characteristic while fully retaining meaning and purpose.
- Added text to clearly state Krill are defined as a Prohibited Harvest Species as part of Amendment 12.

2.1.2 Point of Concern Framework

- Delete #8 and edit #1 of events that may trigger a point of concern

From list of events that might trigger a point of concern, item #8 which only pertained to Monitored stocks is deleted. This change is paired with a slight edit to #1 to incorporate an element of # 8, i.e., moved the acronym “ABC” to maintain the ability to trigger a point of concern based on projections catch may exceed this value for any stock.

4.2 Definition of Overfishing Limits or MSY, and ABC Control Rules

- Deleted “Actively”, replaced with “some” in the third paragraph.

With this change, the meaning of the sentence is retained while pointing less directly to specific stocks.

4.6 Harvest Control Rules

This section generally describes the harvest control rules for use in the management of CPS.

- A sentence is added to clearly identify that there are two primary forms of harvest control rules for CPS.
- The terms “Active” and “Monitored” are replaced with descriptive text that retains their original meaning and utility, function or purpose.

4.6.1 Default CPS Harvest Control Rule

This section provides more detail on the default harvest control rule and the general harvest control rules. It generally describes the harvest control rules for use in the management of CPS.

- The terms “Active” and “Monitored” are replaced with descriptive text that retains the original meaning and utility, function, or purpose.

4.6.4 Monitored Stocks

This section describes in more detail the form of the default control rule and specifies its use for or use of alternatives for northern anchovy, jack mackerel, and market squid.

- Section is retitled from *Monitored Stocks* to *Harvest Control Rules for Northern Anchovy, Jack mackerel, and Market Squid*
- The terms “Active” and “Monitored” are replaced with descriptive text that retains the original meaning and utility, function, or purpose.

4.6.4.4 Market Squid

This section details market squid management.

- The terms “Active” and “Monitored” are deleted; revisions retain the original meaning and utility, function or purpose.

4.6.5 Prohibited Harvest Species

This section describes the management i.e., the prohibition of fishing for or targeting krill species in the U.S. EEZ.

- Minor edits to consistently describe management as Prohibited Harvest Species management and remove the word “category.”
- Minor edit to replace “amendment” with “Amendment 12”

4.7 Stock Assessment and Fishery Evaluation (SAFE) Report

This section specifies the CPSMT will prepare an annual SAFE report and what information should be included.

- Deleted “Actively” and “Monitored”
- Deleted subsection title *Monitored Stocks*

The proposed changes expand the scope of the SAFE to more fully encompass all CPS by removing the delineation between expectations for “Active” and “Monitored” stocks.

The proposed changes to the following sections function to shift the reference from “Active” (or Actively) to “annually” reflecting that “Active” category stocks are managed on an annual basis. The proposed changes do not alter any management process or procedure.

4.8 Annual Specifications and Announcement of Harvest Levels

This section describes publication of final specifications, how incidental catches are accounted for, address minor directed fishing and reallocation of catch.

- Replaced “Actively” with “annually” in the first paragraph.

4.8.1 General Procedures for Setting Annual Specifications

This section describes the process for setting CPS specifications, including the scheduling of Council and advisory body review, and public meetings.

- The term “Actively managed” is replaced where needed with descriptive text that retains the original meaning and utility, function, or purpose.

4.8.2 Factors Considered

This section describes the factors to consider when making annual specifications.

- Replaced “Actively” with “annually” in number 2 of the list of factors.

4.8.3 Guidelines for Choosing Between a Harvest Guideline and Quota

- Replaced “Actively or Monitored” with “each” in the first paragraph.

4.9 Annual Assessment and Management Cycles

This section stipulates the factors to consider when setting schedules for annually managed stocks.

- Replaced “annual” and “Actively managed” with “annually assessed”

Summary

The proposed revisions remove category nomenclature and preserve the existing management approaches for all CPS in the FMP. Sections of the CPS FMP that have no proposed revisions are not included in the attached proposed FMP language. These sections are indicated by ***. The full FMP can be found at www.pcouncil.org, or by clicking [HERE](#).

Attachment: Underline/Strikethrough Excerpts of CPS FMP

COASTAL PELAGIC SPECIES FISHERY MANAGEMENT PLAN

AS AMENDED THROUGH AMENDMENT ~~18~~ 19

Proposed Draft to implement removal of categorization of CPS and category nomenclature

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1.0 INTRODUCTION

1.1 History of the Fishery Management Plan

Amendment 19 removes management categories for CPS and describes management for each management unit species or stock individually.

1.2 Stocks in the Fishery Management Plan

1.2.1 *Fishery-Management Unit Species*

Table 1-1 includes the fishery management unit species which are “in the fishery” and subject to provisions of the CPS FMP.

Table 1-1. Stocks managed under this FMP:

Common Name	Scientific Name
Pacific sardine	<i>Sardinops sagax</i>
Pacific (chub) mackerel	<i>Scomber japonicus</i>
Northern anchovy	<i>Engraulis mordax</i>
Central and northern subpopulations	
Market squid	<i>Doryteuthis opalescens</i>
Jack mackerel	<i>Trachurus symmetricus</i>
Krill or Euphausiids	<i>All Species in West Coast EEZ</i>
Including these eight dominant species.	<i>Euphausia pacifica</i>
First two species are common and are most likely to be targeted by fishing	<i>Thysanoessa spinifera</i>
	<i>Nyctiphanes simplex</i>
	<i>Nematocelis difficilis</i>
	<i>T. gregaria</i>
	<i>E. recurva</i>
	<i>E. gibboides</i>
	<i>E. eximia</i>

Stocks may be added or removed from the management unit through the framework process described in Section 2.0.

1.2.2 *Ecosystem Component Species*

Table 1-2 EC species under this FMP:

Common Name	Scientific Name
Pacific herring	<i>Clupea pallasii</i>
Jacksmelt	<i>Atherinopsis californiensis</i>

Table 1-3 EC species shared between all four of the Council’s FMPs, including the CPS FMP.

Common Name	Scientific Name
Round herring	<i>Etrumeus teres</i>
Thread herring	<i>Opisthonema libertate</i> , <i>O. medirastre</i>
Mesopelagic fishes	Families: <i>Myctophidae</i> , <i>Bathylagidae</i> , <i>Paralepididae</i> , and <i>Gonostomatidae</i>
Pacific sand lance	<i>Ammodytes hexapterus</i>
Pacific saury	<i>Cololabis saira</i>
Silversides*	<i>Atherinopsidae</i>
Smelts	<i>Osmeridae</i>
Pelagic squids	Families: <i>Cranchiidae</i> , <i>Gonatidae</i> , <i>Histioteuthidae</i> , <i>Octopoteuthidae</i> , <i>Ommastrephidae</i> except Humboldt squid (<i>Dosidicus gigas</i>), <i>Onychoteuthidae</i> , and <i>Thysanoteuthidae</i>

*Silversides include jacksmelt, which is also listed in Table 1-2 as an EC species specific to the CPS FMP. Jacksmelt is subject to the same directed fishing prohibition as other Shared EC Species, but it may also be subject to additional management and monitoring requirements that the Council develops for the Table 1-2 EC species particular to this FMP.

1.3 Categories of CPS Management

The CPS FMP ~~includes three primarily utilizes two general management categories or tiers for CPS fish approaches for stocks subject to harvest, recognizing stocks: may warrant either more or less intensive management, depending on harvest levels, biological, socio-economic factors, or other concerns. “Active” management, “Monitored” management, and “Prohibited Harvest” management. “Active” is for stocks and fisheries with biologically significant levels of catch, or biological or socioeconomic considerations requiring relatively intense harvest management procedures. The second category, Monitored, is for stocks and fisheries not requiring intensive harvest management and where monitoring of landings and available abundance indices are considered sufficient to manage the stock. The third category “Prohibited Harvest is for stocks that are prohibited to fish for, harvest or land in any fishery within the West Coast EEZ. Currently this management category consists of all species of euphausiids (krill) that occur in the West Coast EEZ. The purpose of Active and Monitored different management approaches is to use available agency resources in the most efficient and effective manner while satisfying goals and objectives of the FMP. The distinction This enables managers and scientists to concentrate efforts on stocks and segments of the CPS fishery that need the greatest attention or where the most significant benefits might be expected.~~

~~Active CPS management may be characterized by periodic stock assessments, and/or periodic adjustments of target harvest levels based on MSY control rules. Monitored management, in contrast, involves or the tracking of trends in landings and qualitative comparison to available abundance data, but without periodic stock assessments, or periodic adjustments to target harvest levels. Species in both categories All species may be subject to management measures such as catch allocation, gear regulations, closed areas, closed seasons, or other forms of Active management.~~

The CPS FMP includes all species of euphausiids (krill) occurring in the West Coast EEZ as “Prohibited Harvest management Species” and as such it is prohibited includes all species of krill occurring in the West Coast EEZ and to fish for, harvest or land krill in any fishery in the West Coast EEZ. The prohibition is intended to ensure that, to the extent practicable, fisheries will not develop that could put at risk krill stocks and the other living marine resources that depend on krill. This means that OY for krill is zero, and the targeting, harvesting, and transshipping of krill is prohibited. Also, EFPs will not be issued under the EFP procedures of this FMP to allow individuals to harvest krill as an exception to the prohibition of harvest. These actions would fully achieve the objectives of the amendment Amendment 12 to the extent practicable, but would not account for environmental conditions and the responses of krill and other resources to changes in environmental conditions. This management category prohibition recognizes that *de minimis* or trace amounts of krill may be retained by fishermen while targeting other species; such inadvertent action is not intended to be the subject of this prohibition.

SDCs Status determination criteria and management reference points (i.e. ABC and ACLs) must be developed for all fishery management unit species, those species considered “in the fishery.” Market squid are exempt from ACL requirements because their life cycle is less than one year. Monitored CPS management may use generic or general definitions of overfishing and overfished for stocks that do not have specific fishing mortality or biomass cutoffs. EFH must be described for all stocks in the management unit, ~~including Actively managed, Monitored species, and Prohibited Harvest species.~~

The CPSMT will review all CPS stocks annually and make recommendations to the Council and agencies regarding appropriate management ~~categories~~ for each stock (“Active” or “Monitored”). Changes to the ~~appropriate management category~~ for each species, with the exception of krill, can be made annually by the Council based on all available data, including ABC levels and MSY control rules, and the goals and objectives of this FMP. Changes in a management ~~category~~ may be accomplished according to any of the four procedures for establishing and adjusting management measures described below in Section 2.0. ~~In addition, CPS in the Monitored management category can be reassigned to Active management on short notice under the point of concern framework.~~

1.4 Ecosystem Component Species

1.4.1 Shared Ecosystem Component Species

1.5 Operational Definitions of Terms

Acceptable Biological Catch (ABC) is a harvest specification of a stock or stock complex’s annual catch that accounts for the scientific uncertainty in the estimate of OFL and any other scientific uncertainty, and should be based on the ABC control rule. ABC control rule means a specified approach to setting ABC for a stock or stock complex as a function of the scientific uncertainty in the estimate of OFL and any other scientific uncertainty.

Accountability Measures (AMs) are management controls to prevent ACLs from being exceeded and to correct or mitigate overages of the ACL if they occur. There are two categories: inseason AMs and AMs for when the ACL is exceeded.

Annual Catch Limit (ACL) is the level of annual catch of a stock or stock complex that serves as the basis for invoking AMs. ACL cannot exceed ABC but may be divided into sector-specific ACLs.

Annual Catch Target (ACT) is an optional AM. An amount of annual catch that is the management target of the fishery, and accounts for management uncertainty in controlling catch at or below the ACL.

~~Actively managed species (AMS) means CPS the Secretary has determined to require Federal management by HG or quota according to the provisions of the FMP.~~

Biomass means the estimated amount, by weight, of a CPS population. The term biomass means total biomass (age one and above) unless stated otherwise.

Capacity goal means 5,650.9 metric tons (mt), which is the goal for the total gross tonnage (GT) of all vessels participating in the LE fishery established by Amendment 10 to the FMP.

CPS means northern anchovy (*Engraulis mordax*), Pacific mackerel (*Scomber japonicus*), Pacific sardine (*Sardinops sagax*), jack mackerel (*Trachurus symmetricus*), market squid (*Doryteuthis opalescens*), and all species of the family *Euphausiidae* found in the west coast EEZ. Pacific herring (*Clupea pallasii pallasii*) and jacksmelt (*Atherinopsis californiensis*) are included in the FMP as EC species.

CPS Advisory Subpanel (CPSAS) is comprised of members of the fishing industry and public appointed by the Council to review proposed actions for managing the CPS fisheries.

CPS Management Team (CPSMT) means the individuals appointed by the Council to review, analyze, and develop management measures for the CPS fishery.

Comparable capacity means GT as determined by the formula in 46 CFR 69.209(a) for a vessel not designed for sailing plus 10 percent of the vessel's calculated GT.

Council means the Pacific Fishery Management Council, including its CPSMT, CPSAS, SSC, and any other committee established by the Council.

Ecosystem Component species means species not generally targeted or retained for sale, but are infrequently encountered in CPS fisheries. EC species are monitored to ensure that these species are not likely to be subject to overfishing in the absence of CPS management measures.

Egg Escapement Approach means a market squid fishery management approach used to evaluate the effects of fishing mortality (F) on the spawning potential of the stock and in particular, to examine the relationship between the population's reproductive output and candidate proxies for the fishing mortality that results in MSY (F_{MSY}).

Finfish means northern anchovy, Pacific (chub) mackerel, Pacific sardine, and jack mackerel.

Fishery Management Area means the EEZ off the coasts of Washington, Oregon, and California between three and 200 nautical miles offshore, bounded in the north by the Provisional International Boundary between the United States and Canada, and bounded in the south by the International Boundary between the United States and Mexico.

Gross tonnage (GT) means GT as determined by the formula in 46 CFR 69.209(a) for a vessel not designed for sailing ($.67 \times \text{length} \times \text{breadth} \times \text{depth}/100$). A vessel's length, breadth, and depth are those specified on the vessel's certificate of documentation issued by the U.S. Coast Guard or state.

Harvest guideline (HG) means a specified numerical harvest objective that may be specified as an ACT that is not a quota. Attainment of an HG does not require complete closure of a fishery.

Harvesting vessel means a vessel involved in the attempt or actual catching, taking or harvesting of fish, or any activity that can reasonably be expected to result in the catching, taking or harvesting of fish.

Krill means all species of euphausiids that occur in the EEZ off the west coast.

Limited entry (LE) fishery means the fishery comprised of vessels fishing for CPS in the CPS management zone under LE permits issued under this FMP.

Live bait fishery means fishing for CPS for use as live bait in other fisheries.

~~Monitored species (MS) means those CPS the Secretary has determined not to need management by HGs or quotas according to the provisions of the FMP.~~

Nonreduction fishery means fishing for CPS for use as dead bait or for processing for direct human consumption.

Overfishing Level (OFL) means an amount of catch that corresponds to the estimate of fishing mortality on an annual basis, above which overfishing is occurring applied to a stock or stock complex's abundance expressed in terms of numbers or weight of fish.

Owner, as used in this subpart, means a person who is identified as the current owner in the Certificate of Documentation (CG-1270) issued by the U.S. Coast Guard for a documented vessel, or in a registration certificate issued by a state or the U.S. Coast Guard for an undocumented vessel.

Person, as used in this subpart, means any individual, corporation, partnership, association or other entity

(whether or not organized or existing under the laws of any state), and any Federal, state, or local government, or any entity of any such government that is eligible to own a documented vessel under the terms of 46 U.S.C. 12102(a).

Processing or to process means the preparation or packaging of CPS to render the fish suitable for human consumption, pet food, industrial uses or long-term storage, including; but not limited to, cooking, canning, smoking, salting, drying, filleting, freezing, or rendering into meal or oil, but does not mean heading and gutting unless there is additional preparation.

Prohibited Species means species that are subject to fishery controls under state or other Federal regulations and may not be taken, retained, or possessed incidentally by CPS fishery participants.

Prohibited Harvest Species is a ~~management~~ category for species for which it is prohibited to fish for, harvest, or land in any fishery within the West Coast EEZ. ~~Currently this management category consists of all.~~ All species of euphausiids (krill) that occur in the West Coast EEZ are Prohibited Harvest Species. This ~~management~~ category recognizes that *de minimis* or trace amounts of krill may be retained by fishermen while targeting other species; such inadvertent action is not intended to be the subject of this prohibition.

Quota means a specified numerical harvest objective that may be specified as an ACT for a single species of CPS, the attainment (or expected attainment) of which causes the complete closure of the fishery for that species.

Reduction fishery means fishing for CPS for the purposes of conversion into: fish flour; fish meal; fish scrap; fertilizer; fish oil; other fishery products; or byproducts for purposes other than direct human consumption.

Regional Administrator means the Administrator, Southwest Region, NMFS, or a designee.

Reserve means a portion of the HG or quota set aside at the beginning of the year for specific purposes, such as for individual harvesting groups to ensure equitable distribution of the resource.

Sustainable Fisheries Division (SFD) means the Assistant Regional Administrator for Sustainable Fisheries, Southwest Region, NMFS, or a designee.

Threshold level of egg escapement means a level of reproductive (egg) escapement that is believed to be at or near a minimum level necessary to allow the population to maintain its level of abundance into the future (i.e., allow for “sustainable” reproduction year after year).

Totally lost means that the vessel being replaced no longer exists in specie, or is absolutely and irretrievably sunk or otherwise beyond the possible control of the owner, or the costs of repair (including recovery) would exceed the repaired value of the vessel.

1.6 Goals and Objectives

Goals and objectives for the CPS FMP (not listed in order of priority):

- Promote efficiency and profitability in the fishery, including stability of catch.
- Achieve OY.
- Encourage cooperative international and interstate management of CPS.
- Accommodate existing fishery segments.
- Avoid discard.
- Provide adequate forage for dependent species.
- Prevent overfishing.
- Acquire biological information and develop long-term research program.
- Foster effective monitoring and enforcement.
- Use resources spent on management of CPS efficiently.
- Minimize gear conflicts.

2.0 FRAMEWORK MANAGEMENT

The framework approach to management of CPS allows changes and modifications to management procedures to be made in a timely and efficient manner without need to amend the FMP. The FMP establishes two framework procedures through which the Council is able to recommend establishment and adjustment of management measures. The "point-of-concern" framework allows the Council to develop management measures in response to resource conservation and ecological issues. The socioeconomic framework allows the Council to develop management measures in response to social and economic issues.

2.1 Types of Actions and Procedures

2.1.1 *Routine Management Measures*

2.1.2 *Point-of-Concern Framework*

The point-of-concern process is the Council's primary tool (along with setting HGs, ACLs, ACTs, or harvest quotas) for exercising resource stewardship responsibilities. The process is intended to foster continuous and vigilant review of Pacific Coast CPS stocks and fisheries. The process is also to prevent overfishing or any other resource damages. The CPSMT will monitor the fishery throughout the year, and account for any new information on status of each species or species group to determine if a resource conservation or ecological issue exists. Point-of-concern criteria are intended to assist the Council in determining when a focused review on a particular species is warranted and may require implementation of specific management measures. This framework provides the Council authority to act based solely on a point-of-concern. Thus, the Council may act quickly and directly to address resource conservation or ecological issues. In conducting this review, the CPSMT will utilize the most current catch, effort, abundance and other relevant data from the fishery.

In the course of the continuing review, a "point-of-concern" occurs when one or more of the following is found or expected:

1. Catch is projected to exceed the current ABC's, HGs, ACLs, ACTs, or the harvest quota.
2. Any adverse or significant change in the biological characteristics of a species (age composition, size composition, age at maturity, or recruitment) is discovered.
3. An overfishing condition appears to be imminent or likely within two years.
4. Any adverse or significant change in ecological factors such as the availability of CPS forage for dependent species or in the status of a dependent species is discovered.
5. Developments in a foreign fishery occur that affect the likelihood of overfishing of CPS.
6. An error in data or a stock assessment is detected that significantly changes estimates of impacts due to current management.
7. Control rule (harvest policy) parameters or approaches require modification.

8. ~~Projected catches for a Monitored species are expected to exceed the ABC or the ACL using either a species specific control rule or the default control rule. This could require moving a Monitored species to the Actively managed classification.~~

Once a point-of-concern is identified, the CPSMT will evaluate current data to determine if a resource conservation or ecological issue exists and will provide its findings in writing at the next scheduled Council meeting. If the CPSMT determines a resource conservation or ecological issue exists, it will provide its recommendation, rationale, and analysis for appropriate management measures that will address the issue.

Direct allocation of a resource between different segments of a fishery is, in most cases, not the appropriate response to a resource conservation or ecological issue. Council recommendations to directly allocate the resource will be developed according to criteria and processes in the socioeconomic framework described in Section 2.1.3 and Section 2.1.4.

After receiving the CPSMT report, the Council will take public testimony and, if appropriate, recommend management measures to the NMFS Regional Administrator accompanied by supporting rationale and analysis of impacts. The Council analysis will include a description of (1) resource conservation or ecological issues consistent with FMP objectives; (2) likely impacts on other management measures and other fisheries; (3) socioeconomic impacts; and (4) costs and benefits to commercial and recreational segments of the CPS fishery. The recommendation will explain the urgency in implementation of the measure(s), if any.

The NMFS Regional Administrator will review the Council's recommendation and supporting information and will follow appropriate implementation processes described in this FMP, following public notice and comment. If the Council contemplates frequent adjustments to the recommended measures, it may classify them as "routine" through the appropriate process described in Section 2.1.1.

If the NMFS Regional Administrator does not concur with the Council's recommendation, he/she will notify the Council in writing of the reasons for rejection. Nothing prevents the Secretary from exercising authority to take emergency action under Section 305 (c) and (d) of the MSA. Nothing precludes or limits Council access to the point-of-concern framework.

3.0 LIMITED ENTRY

4.0 OPTIMUM YIELD, MAXIMUM SUSTAINABLE YIELD, ACCEPTABLE BIOLOGICAL CATCH, HARVEST CONTROL RULES, AND OVERFISHING DEFINITIONS FOR THE COASTAL PELAGIC SPECIES FISHERY

This FMP defines OY, MSY control rules, and defines overfishing and overfished stocks. All aspects of harvest policies for CPS, including the MSY control rule, definition of overfishing, definition of overfished stocks and rebuilding criteria, can be modified using framework procedures described in Section 2.0.

4.1 Definition of Optimum Yield

4.2 Definition of Overfishing Limits or MSY, and ABC Control Rules

An OFL is an annual amount of catch that corresponds to the estimate of MSY fishing mortality on an annual basis, above which overfishing is occurring applied to a stock or stock complex's abundance expressed in terms of numbers or weight of fish. In general, OFLs for CPS are based on MSY or MSY proxy harvest rates applied to the best available estimate of biomass. In cases where biomass estimates include portions of the population in foreign waters, a DISTRIBUTION term will be used to estimate the percentage of the population in U.S. EEZ.

The ABC is a harvest specification set below the OFL and is a threshold that incorporates a scientific uncertainty buffer against overfishing (i.e., exceeding the OFL). The ABC is decided by the Council based on its preferred level of overfishing risk aversion. The ABC is based on a percentage reduction of the OFL as determined by an SSC determination on scientific uncertainty and a risk policy determined by the Council. In cases where scientific uncertainty (σ) associated with estimating an OFL is quantified by the SSC, the percentage reduction that defines the scientific uncertainty buffer and the ABC can be determined by translating the estimated σ to a range of probability of overfishing (P^*) values. The Council then determines the preferred level of risk aversion by selecting an appropriate P^* value, accordingly. Each P^* value is then matched to its corresponding BUFFER fraction that is applied to the OFL according to the ABC control rule.

OFL	BIOMASS * F_{MSY} * DISTRIBUTION
ABC	BIOMASS * BUFFER * F_{MSY} * DISTRIBUTION

To some extent, the existing harvest control rules for ~~Actively-some~~ managed species merge scientific uncertainty and OY considerations thereby providing additional reductions from OFL levels, particularly during warm temperature regimes. Therefore, harvest control rules will be considered in conjunction with ABC control rules to prevent overfishing (see Section 4.6).

4.3 Definition of Overfishing

4.4 Definition of an Overfished Stock

4.5 Rebuilding Programs

4.6 Harvest Control Rules

For CPS, a harvest control rule is defined to be a harvest strategy that provides biomass levels at least as high as the F_{MSY} approach while also providing relatively high and relatively consistent levels of catch. According to Federal regulations (50 CFR '600.310(b)(1)(ii)), an MSY control rule is "a harvest strategy which, if implemented, would be expected to result in a long-term average catch approximating MSY." Similarly, MSY stock size "means the long-term average size of the stock or stock complex, measured in terms of spawning biomass or other appropriate units that would be achieved under an MSY control rule in which the fishing mortality rate is constant." Harvest specifications as estimated by the harvest control rule shall not exceed ABC or the harvest recommendations of the SSC. Rather, harvest control rules will be

considered in conjunction with ABC control rules to prevent overfishing. The CPS harvest control rules for Actively managed species are more conservative than MSY-based management strategies, because the focus for CPS is oriented primarily towards stock biomass levels at least as high as the MSY stock size while reducing harvest as biomass levels approach overfished levels. The primary focus is on biomass, rather than catch, because most CPS (Pacific sardine, northern anchovy, and market squid) are very important in the ecosystem for forage.

Harvest control rules in the CPS fishery may vary depending on the nature of the fishery, management goals, assessment and monitoring capabilities, and available information. Under the framework management approach used for CPS, it is not necessary to amend the CPS FMP in order to develop or modify harvest control rules or definitions of overfishing. The CPS FMP includes two primary forms of harvest control rules for CPS, the default control rule and the general control rule.

~~The use of a harvest control rule for Actively managed stocks~~ CPS stocks and fisheries with biologically significant levels of catch, or biological, or socio-economic considerations requiring relatively intense harvest management procedures must have stock-specific harvest control rules, a definition of overfishing and a definition of an overfished stock. The purpose of the general harvest control rule, described below, is to provide managers with a tool for setting and adjusting harvest levels on a periodic basis while preventing overfishing and overfished stock conditions. ~~All Actively managed stocks must have stock-specific harvest control rules, a definition of overfishing and a definition of an overfished stock.~~

~~The main use of a harvest control rule for a Monitored stock is to help gauge the need for Active management.~~ CPS stocks and fisheries without biologically significant levels of catch or biological, or socio-economic considerations requiring relatively intense harvest management procedures do not require stock specific harvest control rules. For these rules, the main use of harvest control rules is to help gauge the need for setting and adjusting harvest levels on a more frequent basis. These types of ~~Harvest~~ harvest control rules and harvest policies for ~~Monitored~~ CPS stocks may be more generic and simple than those for ~~Actively managed~~ stocks with significant fisheries. Any stock supporting catches approaching the ABC or MSY levels should be ~~Actively managed~~ with periodic adjustments unless there is too little information available or other practical problems.

4.6.1 Default CPS Harvest Control Rule

The Council may use the default harvest control rule, defined below, for ~~Monitored~~ species where it has been determined that little need for intensive management exists unless a better species-specific rule is available. The default harvest control rule can be modified under framework management procedures.

The default harvest control rule (~~intended primarily for stocks that are Monitored~~) sets ABC for the entire stock (U.S., Mexico, Canada, and international fisheries) equal to 25 percent of the best estimate of the MSY catch level. Overfishing occurs whenever the total catch (U.S., Mexico, Canada, and international fisheries) exceeds ABC or whenever fishing occurs at a rate that is high enough to jeopardize the capacity of the stock to produce MSY. Overfishing of a ~~Monitored~~ CPS stock managed using the default control rule is "approached" whenever projections or estimates indicate that the overfishing will occur within two years.

In making decisions about ~~Active management~~ using the general control rule or another stock-specific control rule, the Council may choose to consider ABC and catches in U.S. waters only. ABC in U.S. waters is the ABC for the entire stock prorated by an estimate of the fraction of the stock in U.S. waters. ~~Active management~~ Management may not be effective if U.S. catches are small and overfishing is occurring in Mexico, Canada, or in international waters outside the jurisdiction of Federal authorities.

General Harvest Control Rule for Actively Managed Species

The general form of the harvest control rule utilized for the California CPS fisheries was designed to continuously reduce the exploitation rate as biomass declines. The general formula used is:

$$H = (\text{BIOMASS-CUTOFF}) \times \text{FRACTION} \times \text{DISTRIBUTION}$$

H is the harvest target level, CUTOFF is the lowest level of estimated biomass at which directed harvest is allowed and FRACTION is the fraction of the biomass above CUTOFF that can be taken by the fishery. BIOMASS is generally the estimated biomass of fish age 1+ at the beginning the season. DISTRIBUTION is the average portion of biomass assumed in U.S. waters. The purpose of CUTOFF is to protect the stock when biomass is low. The purpose of FRACTION is to specify how much of the stock is available to the fishery when BIOMASS exceeds CUTOFF. It may be useful to define any of the parameters in this general harvest control rule so that they depend on environmental conditions or stock biomass. Thus, the harvest control rule could depend explicitly on the condition of the stock or environment.

4.6.4 ~~Monitored Stocks~~ Harvest Control Rules for Northern Anchovy, Jack Mackerel, and Market Squid

Management of ~~Northern~~ northern anchovy (northern and central subpopulations), jack mackerel and market squid will, ~~be monitored~~ at the outset of the CPS FMP-, use ~~The~~ the default control rules and overfishing specifications ~~will be used for Monitored stocks~~. Stock specific MSY proxies, ABC, and ACLs can be revised based on the best available science as recommended by the SSC and as adopted through the annual harvest specification process, and will be reported in the CPS SAFE.

The OFL will be based on species-specific MSY proxies. In general, the default ABC control rule consists of a 75 percent reduction from OFL to ABC until such time as the SSC recommends an alternate value based on the best available science. ACLs would be specified for multiple years until such time as the species becomes actively managed using the general harvest control rule or a new species-specific control rule, or new scientific information becomes available. ACLs may also be sector-specific.

OFL	STOCK SPECIFIC MSY PROXY
ABC	OFL * 0.25
ACL	Equal to ABC or reduced by OY considerations.

4.6.4.1 Northern Anchovy-Central Subpopulation

4.6.4.2 Northern Anchovy-Northern Subpopulation

4.6.4.3 Jack Mackerel

4.6.4.4 Market Squid

The MSY Control Rule for market squid is founded generally on conventional spawning biomass “per recruit” model theory. Specifically, the MSY Control Rule for market squid is based on evaluating (throughout a fishing season) levels of egg escapement associated with the exploited population. The estimates of egg escapement are evaluated in the context of a “threshold” that is believed to represent a minimum level that is considered necessary to allow the population to maintain its level of abundance into the future (i.e., allow for “sustainable” reproduction year after year). In practical terms, the Egg Escapement approach can be used to evaluate the effects of fishing mortality (F) on the spawning potential of the stock, and in particular, to examine the relation between the stock’s reproductive output and candidate proxies for the fishing mortality that results in MSY (F_{MSY}).

The fishing mortality (F_{MSY}) that results in a threshold level of egg escapement of at least 30 percent will be used initially as a proxy for MSY. However, it is important to note that the level of egg escapement will be reviewed on an intermittent basis as new information becomes available concerning the dynamics of the stock and fishery, to ensure that the proposed threshold meets its objective as a long-term, sustainable biological reference point for this marine resource. This is not a trivial exercise, given the need for ongoing research regarding the biology of this species, which may result in revised recommendations in the future. Ultimately, the market squid fishery can operate freely, within the constraints of currently adopted regulations as dictated by the CDFG (e.g., annual landings cap, weekend closures, closed areas) and NMFS, as long as egg escapement is equal to, or greater than, the threshold value. Assessments will be conducted on a yearly basis for the first two years (2002-04) and on a multi-year basis beginning in 2005. In the event that egg escapement is determined to be below the 30 percent threshold for two successive years, then a point-of-concern would be triggered under the FMP’s management framework, and the Council could consider ~~moving~~ revising market squid ~~from Monitored to Active~~ management status. Current state regulations for squid are not anticipated to change in the near future, however, should existing laws limiting effort or harvest be rescinded, further management actions by the Council could also be considered.

As noted, the Council and state authorities will continue to monitor squid landings. If landings increase or a biological risk to the stock develops, the Council can be expected to ~~promote~~ revise squid ~~to Active~~ management quickly under the “point-of-concern” framework management procedures (Section 2.1.2).

4.6.5 Prohibited Harvest Species

Prohibited Harvest Species management includes all species of krill occurring in the West Coast EEZ and is intended to ensure that, to the extent practicable, fisheries will not develop that could put at risk krill stocks and the other living marine resources that depend on krill. This means that OY for krill is zero, and the target, harvest and transshipment of krill is prohibited. Also, EFPs will not be issued under the EFP procedures of this FMP to allow individuals to harvest krill as an exception to the prohibition of harvest. These actions would fully achieve the objectives of the ~~amendment~~ Amendment 12 to the extent practicable, but would not account for environmental conditions and the responses of krill and other resources to changes in environmental conditions. Prohibited Harvest Species ~~This management category~~ recognizes that *de minimis* or trace amounts of krill may be retained by fishermen while targeting other species; such inadvertent action is not intended to be the subject of this prohibition.

4.7 Stock Assessment and Fishery Evaluation Report

The CPSMT will prepare an annual SAFE report describing the status of the CPS fishery. The SAFE report provides information to the councils for determining annual harvest levels for each stock, documenting significant trends or changes in the resource, marine ecosystems, and fishery over time, and assessing the relative success of existing state and Federal fishery management programs. This includes landings, prices,

revenues, and economic, biological or environmental conditions not covered elsewhere in assessments for ~~Actively managed~~ CPS species. In particular, the SAFE report shall include:

The Council will notice the availability of SAFE reports via mailing lists and the Council newsletter and will publish SAFE reports primarily via the Council web page. Paper copies will be provided on request.

Monitored Species

The annual SAFE report prepared by the CPSMT will include all available information that may be used to determine if a point-of-concern exists (e.g., overfishing) or if a stock should be considered for ~~Active changes in its management or for Monitored management~~. ~~At a minimum, the report should contain landings data for Monitored stocks and any available information about trends in abundance.~~

4.8 Annual Specifications and Announcement of Harvest Levels

Each year, the Secretary will publish in the *Federal Register* the final specifications for all CPS ~~Actively~~ annually managed by the Council. The total U.S. harvest will be allocated to the various fisheries as ACLs, HGs or ACTs, or as quotas.

In calculating ACLs, ACTs, HGs and quotas for each species, an estimate of the incidental catch of each species caught while fishermen are targeting other species will be taken into account. Therefore, the total HG will consist of an incidental catch portion and a directed fishery portion. In general, HGs or ACTs will be used to describe direct and incidental take, will set in accordance with harvest control rules, and will be below the ACL to take into account management uncertainty and additional known sources of mortality such as discards, bycatch, research take, and live bait fisheries. This will be done to minimize the chances of exceeding the target harvest levels and the ACL.

If the HG, ACL, or ACT for the directed fishery is reached the directed fishery will be closed by an automatic action and incidental catch will continue to be allowed under the incidental catch allowance, which is expressed in an amount of fish or a percentage of a load (Section 5.1). Minor directed fishing will also be allowed to continue after a directed fishery is closed, unless otherwise specified by the Council, or an ACL is anticipated to be exceeded (Section 5.2). If the estimated incidental catch portion of the HG, ACL, or ACT has been set too high, resulting in the probability of not attaining the target harvest level by the end of the fishing season, the remaining incidental catch portion may be allocated to the directed fishery through the "routine" management procedures. This reallocation of the remaining incidental catch portion of the HG to the directed fishery is not likely to be necessary unless substantial errors are discovered in calculations or estimates.

4.8.1 General Procedure for Setting Annual Specifications

The intent of the management approach under the FMP is to reassess the status of each ~~Actively managed~~ species for which the Council has determined a need at frequent intervals and preferably every year (although a full analytic stock assessment may not be necessary or possible in some cases). The general procedure for making the annual specifications for CPS is as follows:

1. The CPSMT will produce a SAFE report as specified in Section 4.7 that documents the current estimates of biomass for each CPS assessed and status of the fishery. In the report, the CPSMT will recommend either HGs or quotas ~~for Actively managed species~~, including a directed portion and an incidental portion, an initial incidental catch allowance to be used when HGs are reached together with

an estimate of total incidental catch, and will make all calculations of the specifications as required by this FMP.

4.8.2 *Factors Considered*

The following factors will be considered when making the annual specifications:

1. The current estimated biomass and any other biological information.
2. The harvest control rule described in the FMP, which is specific for each ~~Actively~~ annually managed species.
3. Results of comments of domestic processors and joint venture operations about processing capacity and planned utilization.
4. Results of an analysis of the fishing capacity and planned utilization of recent years modified by new information and comments by the fishing industry relating to intended use.
5. Information on ecological factors such as the status of the ecosystem, predator-prey interactions, or oceanographic conditions that may warrant additional ecosystem-based management considerations.
6. Any relevant historical information on the utilization of CPS resources.

All data used to make annual specifications will be available for public inspection during normal business hours at the Southwest Regional Office of NMFS.

4.8.3 *Guidelines for Choosing Between a Harvest Guideline and Quota*

HGs or quotas generally function as ACTs and can be specified as such. The maximum HG is derived by the harvest control rule in place for ~~actively or monitored~~ each stocks. The Council may adopt the maximum HG so long as it is below the established ACL. Additionally, the Council will consider potential factors that may contribute to exceeding an HG, quota, or other ACT to determine if the recommended harvest target is sufficiently low to avoid exceeding the ACL.

4.9 Annual Assessment and Management Cycles

This FMP specifies that ~~annual~~ schedules for ~~Actively managed~~ annually assessed CPS be developed based on the Council's workload and meeting schedule, opportunity for industry and technical review of biomass estimates and HGs or quotas, seasonal patterns in the fishery, collection and processing of CalCOFI data during the peak spawning season, collection of other data, time required for notification of fishers, and workload of the CPSMT and CPSAS. The FMP does not specify what those schedules will be, since they will be implemented through regulations.

The annual assessment and management cycles determine the start and close date (season) for each ~~Actively managed~~ annually assessed fishery. These may be changed by abbreviated rulemaking as described in Section 2.1.

5.0 BYCATCH, INCIDENTAL CATCH, AND ALLOCATION
