

Agenda Item F.7  
Supplemental Staff Presentation 1  
Todd Phillips  
March 2023

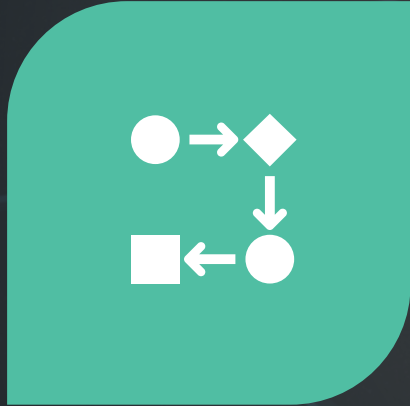
# **AMENDMENT 31 STOCK DEFINITIONS**

Agenda Item F.7, Attachment 1

March 8, 2023



# Discussion Outline



**Background And  
Process**



**Alternatives Under  
Consideration**



**Analytical Findings**

# Proposed Scope for Action § 1.1

- Select a Preliminary Preferred Alternative
- Refine the Range of Alternative, as appropriate
- Action will define stock(s) for priority species
  - Black rockfish (rf), canary rf, copper rf, Dover sole, lingcod, Pacific spiny dogfish, quillback rf, petrale sole, rex sole, sablefish, shortspine thornyhead, squarespot rf, & vermilion/sunset rf

# History of Action § 1.4

## **March 2022**

- Informed FMP does not define stocks

## **June 2022**

- Initial Scoping for Amendment 31

## **September 2022**

- Selection of Priority Species for Action

## **November 2022**

- Range of Alternatives Selected

## **March 2023**

- Preliminary Preferred Action

# Commonly Used Terms

Species – a [fish] capable of interbreeding with individuals of the same species

Population – a group of interbreeding individuals of the same species

Sub-population – a delineated subset of individuals within a population

# Key Aspects of a Stock §§ 1.3 & 6

- A stock is “a species, subspecies, geographical grouping, or other category of fish capable of management as a unit<sup>1</sup>”
- Status determinations are made for the stock
- A stock should have a single OFL/ABC and harvest control rule (e.g., ACL control rule)



## **Analytical Process § 1.6**

**Followed process in Agenda Item H.5, Attach. 1, Nov. 2022**

- 1. Investigate population structure via genetics, adult movement, and larval dispersal**
- 2. Confirm BSIA recommendations from SSC**
- 3. Identify NMFS status areas**
- 4. Identify spatial scale of ACLs**
- 5. Review stock assessment spatial scale**
- 6. Confirm assessment recommendations from Council**



## Population structure, status, ACL scale, & Assessment Delineation

<b>Species</b>	<b>BSIA</b>	<b>NMFS Status Area</b>	<b>ACL Scale</b>	<b>Assessment Stratification</b>
Canary Rockfish	Coastwide	Pacific Coast	Coastwide	Coastwide
Rex Sole	Coastwide	Pacific Coast	Coastwide	Coastwide
Lingcod	North of 40°10' N. lat.	North Pacific Coast	North of 40°10' N. lat.	North of 40°10' N. Lat.
	South of 40°10' N. lat.	South Pacific Coast	South of 40°10' N. lat.	South of 40°10' N. lat.
Sablefish	Coastwide	Pacific Coast	Coastwide/ apportioned N. & S of 36 N. lat.	Coastwide





# Alternatives § 2.1

- No Action
- Alternative 1: Single stock
  - Sub-alternative 1a — Differential Harvest Control Rules (HCR) for stocks with sub-area assessments
  - Sub-alternative 1b — One HCR for the stock
- Alternative 2 and Sub-Alternative 2a: Two Stocks
- Alternative 3 and Sub-Alternative 3a: Three Stocks
- Alternative 4: Four Stocks



# Species and Alternatives Guide §§ 3.2 & 3.3

- Canary rockfish, Dover sole, petrale sole, Pacific spiny dogfish, rex sole, sablefish, shortspine thornyhead – only considered under Alternative 1
- Lingcod only considered under Alternative 2
- Black, copper, quillback, squarespot, and vermilion/sunset rockfish considered under multiple alternatives.

# Alternative 1

- For black rockfish (rf), canary rf, copper rf, Dover sole, Pacific spiny dogfish, quillback rf, petrale sole, rex sole, sablefish, shortspine thornyhead, squarespot rf, & vermilion/sunset rf
- Single stock
- Status would be determined for a single stock
- Single area
- Excludes lingcod

# Alternative 2 & Sub-Alternative 2a

## Alternative 2: Lingcod and Vermilion/Sunset Rockfish\*

Two stocks, delineated north and south of 40°10' N. lat.

\*Vermilion/Sunset Rockfish – *would require new stock assessment.*

## Sub-Alternative 2a: Copper Rockfish

- Two stocks, delineated as a California stock and a combined Washington and Oregon stock
- SSC-recommended for determining status<sup>1</sup>

<sup>1</sup>. See [Agenda Item E.3, Supplemental SSC Report 1, November 2021](#)

# Alternative 3 & Sub-Alternative 3a

## Alternative 3: Black, Copper, Quillback, Squarespot, & Vermilion/Sunset Rockfishes

- Three stocks, delineated as state-specific stocks

## Sub-Alternative 3a: Vermilion/Sunset Rockfish:

- Three stocks, delineated as a Washington and Oregon stock, a Northern California stock, and a Southern California stock
- N/S California delineated at Pt. Concepción (34° 27' N. lat.)
- SSC-recommended for determining status<sup>2</sup>

<sup>2</sup>. See Agenda Item E.3, Supplemental SSC Report 1, November 2021

# Alternative 4

## Vermilion/sunset rockfish only

- A Washington stock, an Oregon stock, a Northern California stock, and a Southern California stock
- N/S California divided at Pt. Concepción (34° 27' N. lat.)
- SSC-recommended (November 2022<sup>3</sup>)



# Analytical Findings: Species Level § 3.2.1

Canary rockfish, Dover sole, petrale sole, Pacific spiny dogfish, rex sole, sablefish, & shortspine thornyhead

- BSIA: Indicates no discernable population structure
- ACLs are coastwide\*
- NMFS status area Pacific Coast
- Assessment scale is coastwide
- Only considered under Alternative 1

\* Sablefish & shortspine thornyhead have sub-area ACLs but a single ACL control rule



# Analytical Findings: Species Level § 3.2.2

## Lingcod

- BSIA: Population structure N/S of 40°10' N. lat.
- ACL scale N/S of 40°10' N. lat.
- NMFS status area N/S of 40°10' N. lat.
- Assessments scale N/S of 40°10' N. lat.
- Only considered under Alternative 2



# Analytical Findings: Species Level §§ 3.3, 3.4

Black, copper, quillback, squarespot, & vermilion/sunset rockfishes

- BSIA: Population structure is at a finer scale than coastwide
- ACL scale vary by species
- NMFS status area varies
- Assessment are at finer scale than coastwide

# Analytical Findings: Stock Level (1 of 2)

- MSA and NS 1 indicate a stock is an indivisible unit
- FMP's harvest specification framework, as a whole, is applicable to a stock
- Alternatives generally meet the Purpose and Need
  - Potential exception: Alternative 2 for vermilion/sunset rockfish (N/S 40°10' N. lat.);
  - NMFS would be unable to make status determinations at this scale based on the 2021 assessment

# Analytical Findings: Stock Level (2 of 2)

## Pooling of stocks' sub-area assessments

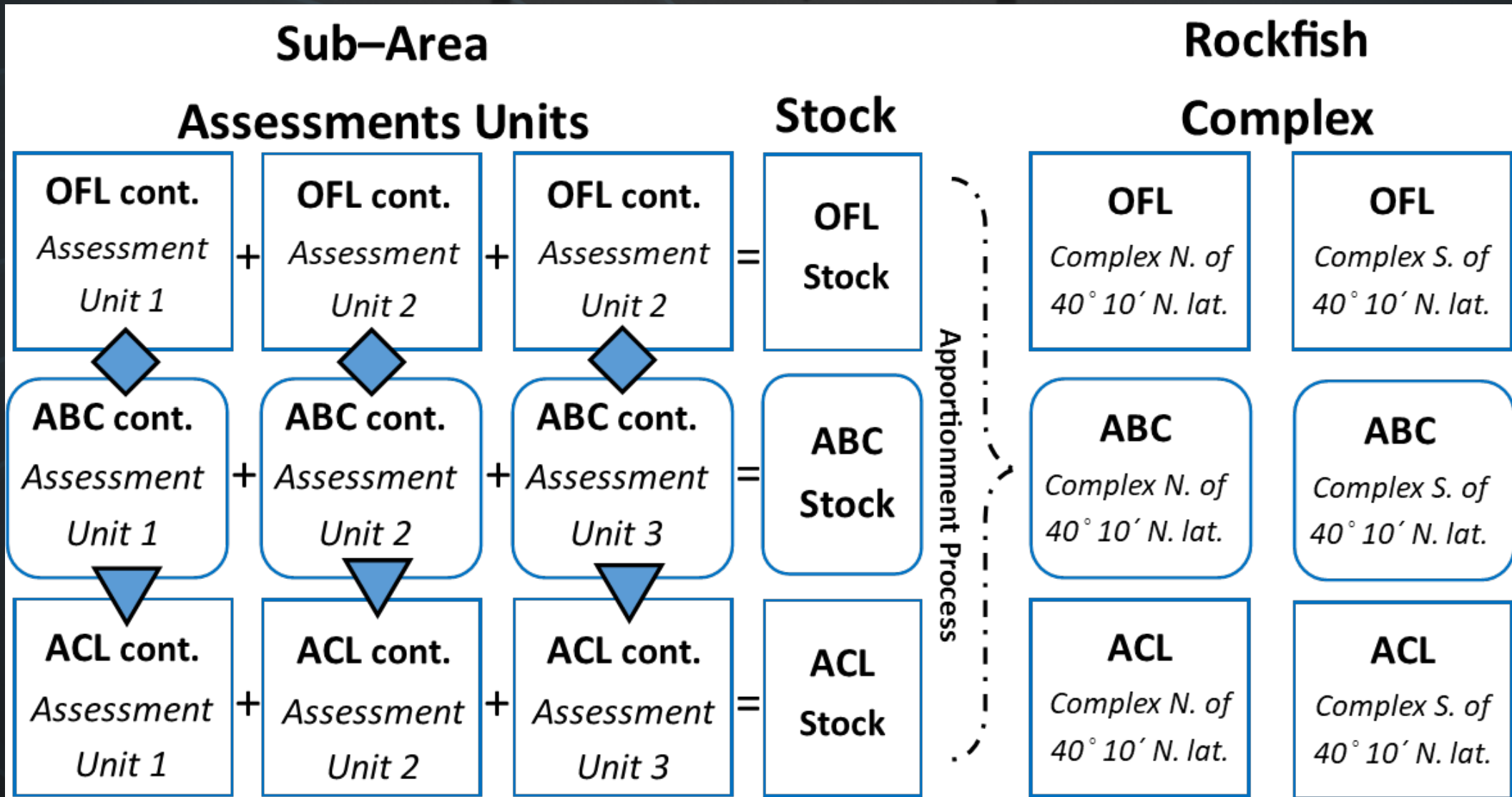
- Presents unique challenges
- May do less to prevent/address localized depletion
- Finer scale HCRs and/or management measures may not be an adequate substitute for stock status determinations that help prevent overfishing and achieve OY

Pooling of assessments could lead to need for an allocative decision when the stock definition is mis-aligned with management

# Alternative 1: Sub-Alternatives 1a & 1b § 3.5

- Difference hinges on varying applicability of HCRs when sub-area assessments are pooled for a single stock.
- Harvest Control Rules (HCR) are those methods used to calculate harvest specifications (e.g.,  $P^*$ , sigma, etc.)
- Project team developed 2 conceptual sub-alternatives
- Project team assumed species would continue to be in complexes

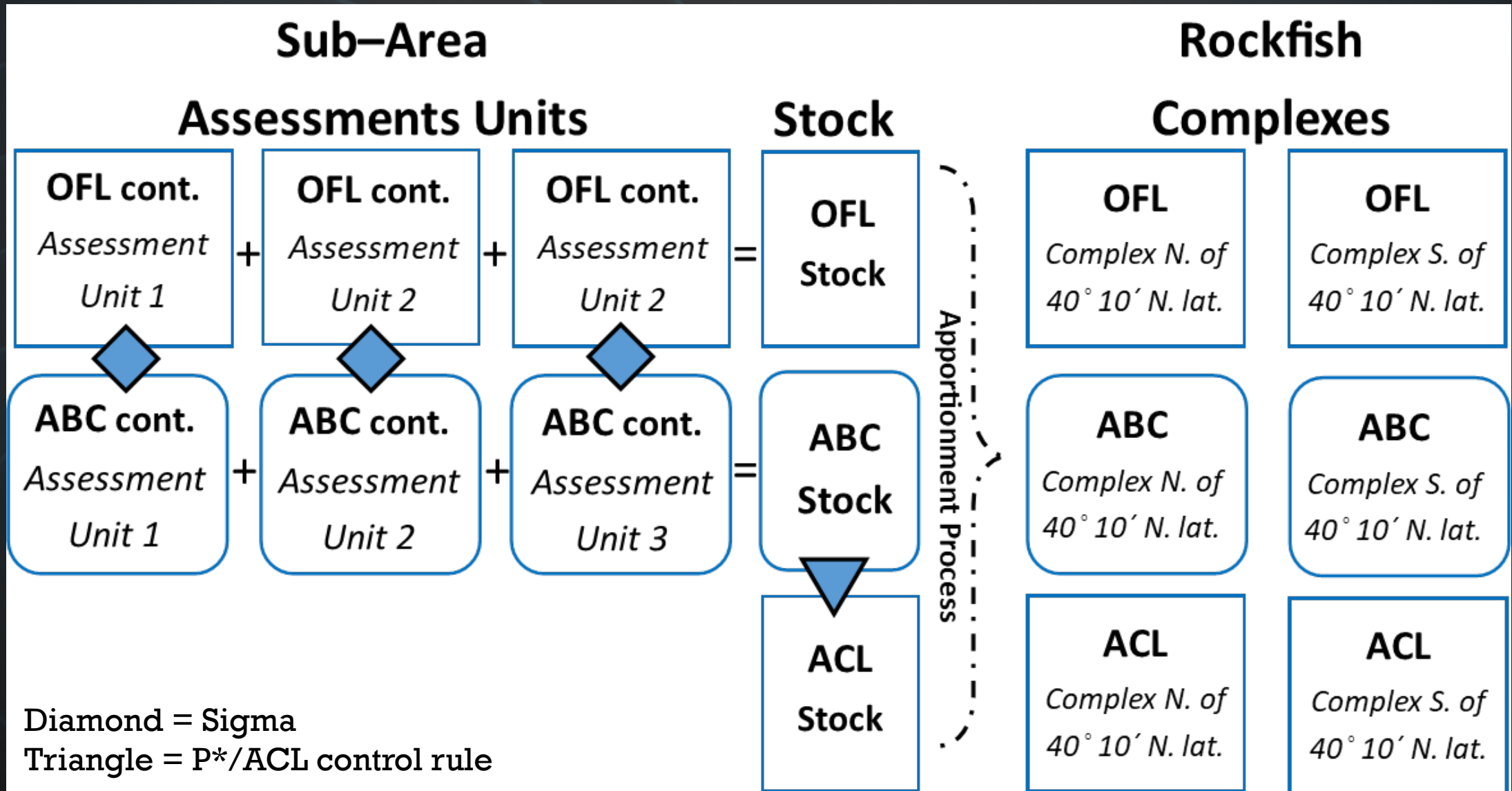
# 1a: Single Stock, Sub-area Assessments, Multiple HCRs, Complexes



Diamond = Sigma Triangle = P\*/ACL control rule



# 1b: Single Stock, Sub-area Assessments, Single HCR, Complexes



# Alternative 1: Sub-Alternatives 1a & 1b (1 of 2)

- 1a may require revision of the harvest specifications framework
- Both may require more NWFSC/SSC involvement to develop methodologies for the Terms of Reference
- Both have uncertainty on how to combine assessments with differing categories (§ 3.3.1)

# Alternative 1: Sub-Alternatives 1a & 1b (1 of 2)

- Both may not align with National Standards
  - 1a: applying varying HCRs might not align with NS1;
  - 1b: single stock for species with known population structure might not align with NS1 or NS2.



# Other Considerations

## Integrating stock definitions into COP 9 (§ 5)

- Informational, not relevant for PPA decision
- This process will need to be integrated into the groundfish management timeline -e.g., COP 9
- Council could consider directing further development for consideration at later date
- Figure 8 provides conceptual timeline

## Project Team

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