Agenda Item E.3.a Supplemental CPSMT Presentation 1 April 2021

CPS ESSENTIAL FISH HABITAT REVIEW PHASE 1

OVERVIEW

Part 1



Literature Review

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Review of Required Components Recommendations L. Wargo CPSMT/WDFW

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Part 1-Background

 Magnuson Steven Act (MSA) requirements
 FMPs should describe and identify Essential Fish Habitat (EFH) for each species in the FMP's fishery management unit (FMU)

Federal Regulatory (at 50 CFR §600.805) requirements
 O Identify adverse impacts from fishing and non-fishing activities

- Recommend conservation measures
- Consider habitats of particular concern (HAPC)
- Address other EFH components

Part 1-Background

CPS EFH Description & Identification

"The east-west geographic boundary of EFH for each individual CPS finfish and market squid is defined to be all marine and estuarine waters from the shoreline along the coasts of California, Oregon, and Washington offshore to the limits of the exclusive economic zone (EEZ) and above the thermocline where sea surface temperatures range between 10°C to 26°C. The southern boundary of the geographic range of all CPS finfish is consistently south of the US-Mexico border, indicating a consistency in SSTs below 26°C, the upper thermal tolerance of CPS finfish. Therefore, the southern extent of EFH for CPS finfish is the US-Mexico maritime boundary. The northern boundary of the range of CPS finfish is more dynamic and variable due to the seasonal cooling of the SST. The northern EFH boundary is, therefore, the position of the 10°C isotherm which varies both seasonally and annually."



Part 1- Objectives

Evaluate
 Published & unpublished scientific papers and reports
 Information from interested parties that can support or improve the elements of CPS EFH

Describe & Identify Fishing and non-fishing activities that may adversely affect CPS EFH, HAPCs, etc.



Part 1-Assemblage/Species

> Finfish

Pacific sardine



Pacific mackerel



Jack mackerel

Northern anchovy







Part 1-Assemblage/Species

Market squid



Krill (2 dominant species)







Part 1- Scientific Information

\triangleright Reviewed papers (357)

Assemblage/Species	Period	Distribution & Habitat Identification Papers
Finfish	2010-2020	153
Market Squid		29
Krill	Prior to 2021	75



Finfish (Improved information)

- Coast-wide survey data on all stocks
- Stocks remain within their expected geographic ranges
- Influences of PDO and ENSO on CPS distribution
- o Better prediction of seasonal habitat location
- Long time series of sardine and anchovy predator diets
- Data for ecosystem modeling and impact assessment



Finfish (Stock status)

- Low sardine biomass in US waters, with spawning stock mainly centered off southern Oregon and northern California
- Low anchovy biomass in 2009-2015, but increasing biomass since 2017
- Relatively low Pacific mackerel biomass since 2008
- Jack mackerel stock is still mostly distributed outside of the US EEZ



Market squid (Improved information)

- Stock remains within expected geographic boundaries, but with recent northward shift in habitat
- Influence of ENSO on distribution and habitat
- 0 Distribution of egg beds off California
- Distribution and physical characteristics of habitats
- Relatively low abundance since 2016, with higher biomass off northern California and southern Oregon



Krill (Improved information)

- *E. Pacifica*: Distributed in subarctic Pacific ocean and marginal and seaward of the continental shelf break;
 T. spinifera: Distribution shifted in the 1980s, becoming more abundant in coastal waters between Bering sea and Central California
- Oceanic processes and atmospheric events influence abundance and habitat distribution
- Hotspots associated with marine predators
- Data for ecosystem modeling and impact assessment

Part 1- Summary

- Although spawning, juvenile, and adult habitats may have shifted under environmental conditions, most CPS are still distributed within their expected geographic ranges.
- Beyond temperature, new physical and biological parameters have been used to model and predict the distribution of CPS habitats.
- Long time series of CPS predator diets have been developed, allowing better assessment of the impact of the abundance of CPS on the maintenance of the CCE.
- No new evidence of MSA fishing activities that may significantly impact CPS EFH.



PART 2- REVIEW OF REQUIRED COMPONENTS



EFH Identified for Each Life Stage	Maps	Fishery Descriptions
Encourage Conservation and Enhancement of EFH	Non-Fishing Impacts	Minimize Fishing Impacts (Ongoing)
Best Available Science	EFH Designated for Species/Complex	ldentify Non-MSA Fishing Activity

PART 2- RECOMMENDATIONS

CPSMT recommends advancing to Phase 2

Tasks to consider





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