

GOA Other Rockfish



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Outline

- 2017 Other Rockfish (OR) assessment
 - Changes to this years assessment
 - Updated Catch
 - 2017 Trawl Survey and Biomass Estimates
 - Harvest Recommendations
 - Area Allocation
- OR/DSR species groupings



OR Complex

- Two sub-groups within the complex, based on:
 - Life history
 - Spatial distribution
 - Fishery characteristics
- **Demersal sub-group**: canary, china, copper, quillback, rosethorn, tiger and yelloweye rockfish
- **Slope sub-group**: 18 remaining species



OR Complex

WGOA & CGOA

Blackgill rockfish
 Bocaccio
 Canary rockfish
 Chilipepper rockfish
 China rockfish
 Copper rockfish
 Darkblotched rockfish
 Greenstriped rockfish
 Harlequin rockfish

 Pygmy rockfish
 Quillback rockfish
 Redbanded rockfish
 Redstripe rockfish
 Rosethorn rockfish
 Sharpchin rockfish
 Silvergray rockfish
 Splitnose rockfish
 Stripetail rockfish
 Tiger rockfish
 Vermilion rockfish
 Widow rockfish
 Yelloweye rockfish
 Yellowmouth rockfish
 Yellowtail rockfish

EGOA (WY)

Blackgill rockfish
 Bocaccio
 Canary rockfish
 Chilipepper rockfish
 China rockfish
 Copper rockfish
 Darkblotched rockfish
 Greenstriped rockfish
 Harlequin rockfish
 Northern rockfish
 Pygmy rockfish
 Quillback rockfish
 Redbanded rockfish
 Redstripe rockfish
 Rosethorn rockfish
 Sharpchin rockfish
 Silvergray rockfish
 Splitnose rockfish
 Stripetail rockfish
 Tiger rockfish
 Vermilion rockfish
 Widow rockfish
 Yelloweye rockfish
 Yellowmouth rockfish
 Yellowtail rockfish

EGOA (EY/SEO)

Blackgill rockfish
 Bocaccio

 Chilipepper rockfish

 Darkblotched rockfish
 Greenstriped rockfish
 Harlequin rockfish
 Northern rockfish
 Pygmy rockfish

 Redbanded rockfish
 Redstripe rockfish

 Sharpchin rockfish
 Silvergray rockfish
 Splitnose rockfish
 Stripetail rockfish

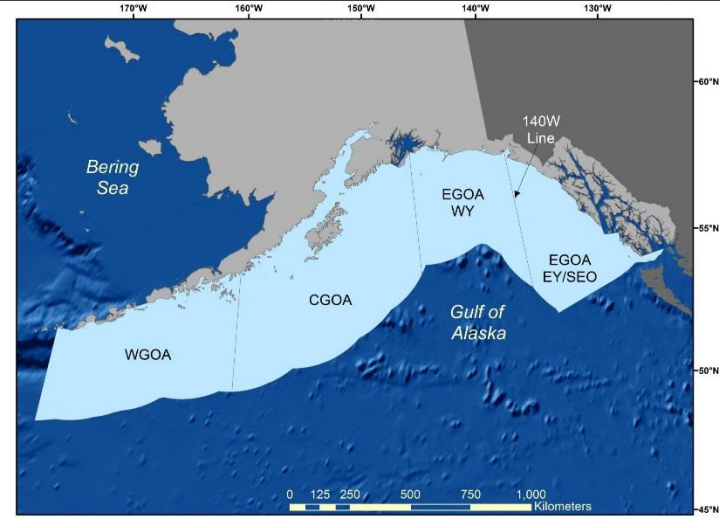
 Vermilion rockfish
 Widow rockfish

 Yellowmouth rockfish
 Yellowtail rockfish

24 Species

25 Species

18 Species



2017 OR Assessment

- Changes to the input data
 - Catch updated through Oct 13, 2017
 - NMFS bottom trawl survey data updated
 - Updated random effects biomass model
- Changes in assessment methodology
 - Tier 6 – new method



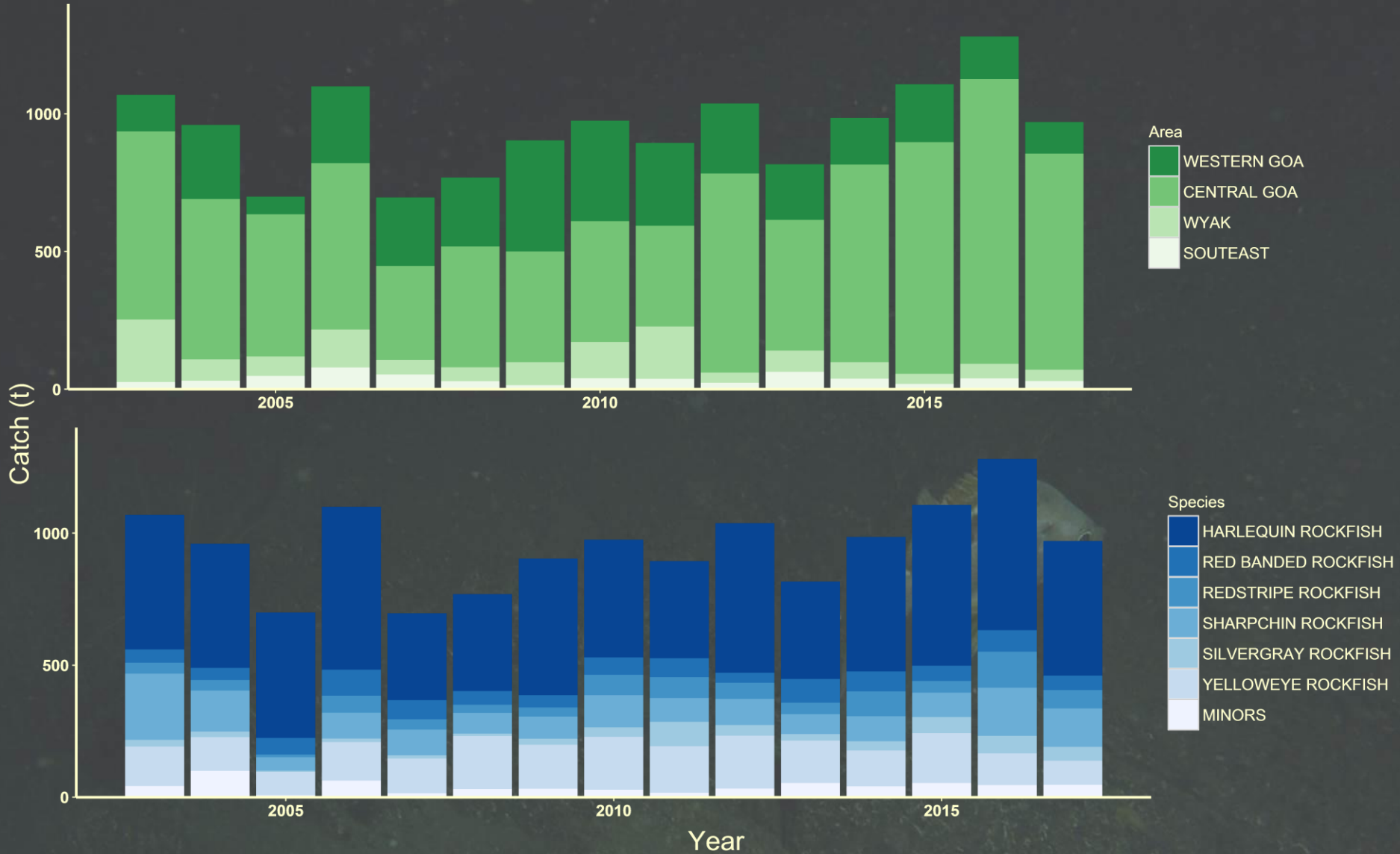
GOA Other Rockfish Catch

- Well below ABCs for all areas in GOA

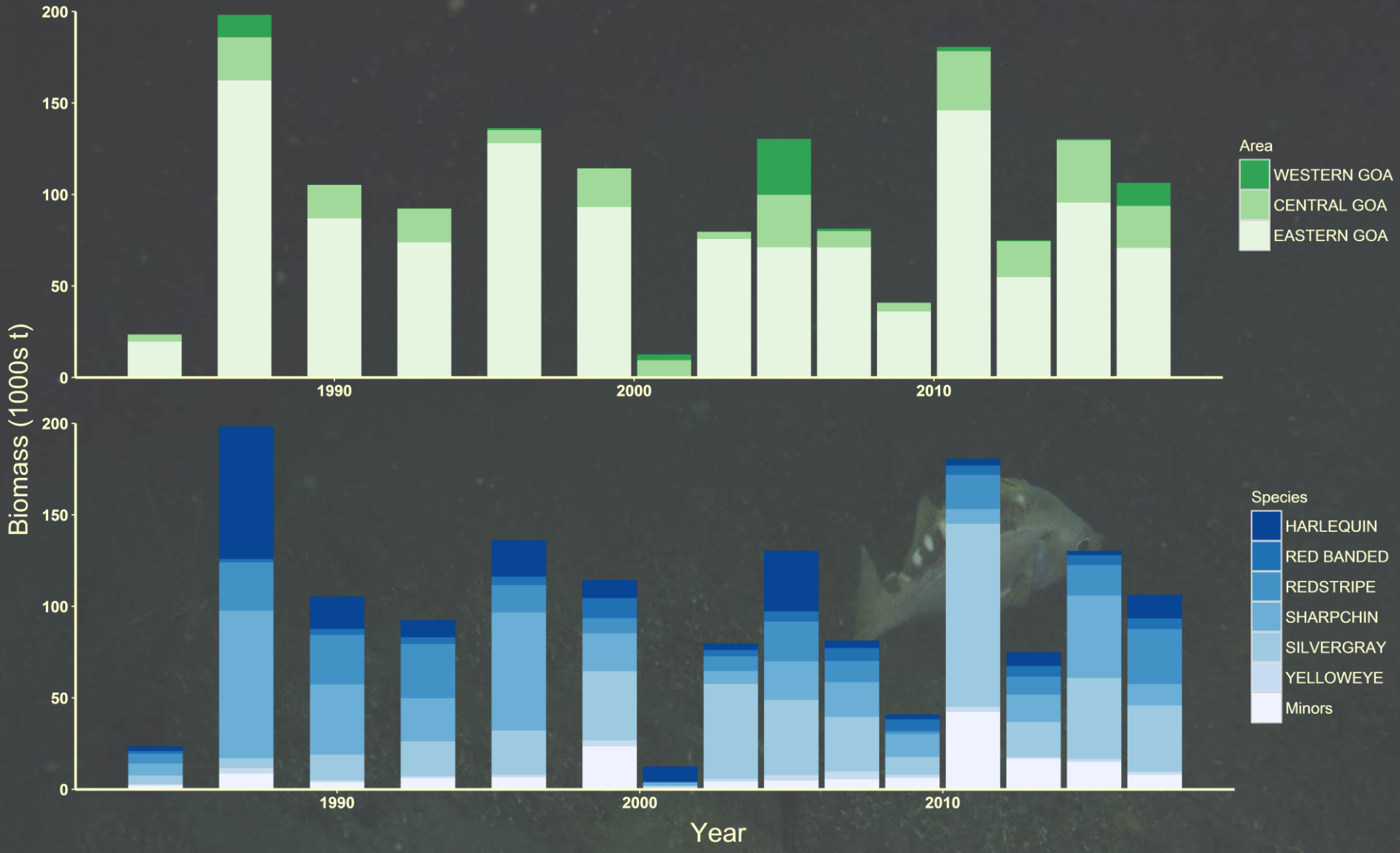
Area	2017			Catch
	OFL	ABC	TAC	
WGOA/CGOA		1,534	1,534	899
EGOA	WY	574	574	41
	EY/SE	3,665	200	29
Total	7,424	5,773	2,308	970*

*Catch as of Oct 13, 2017

GOA Other Rockfish Catch



GOA Other Rockfish Biomass



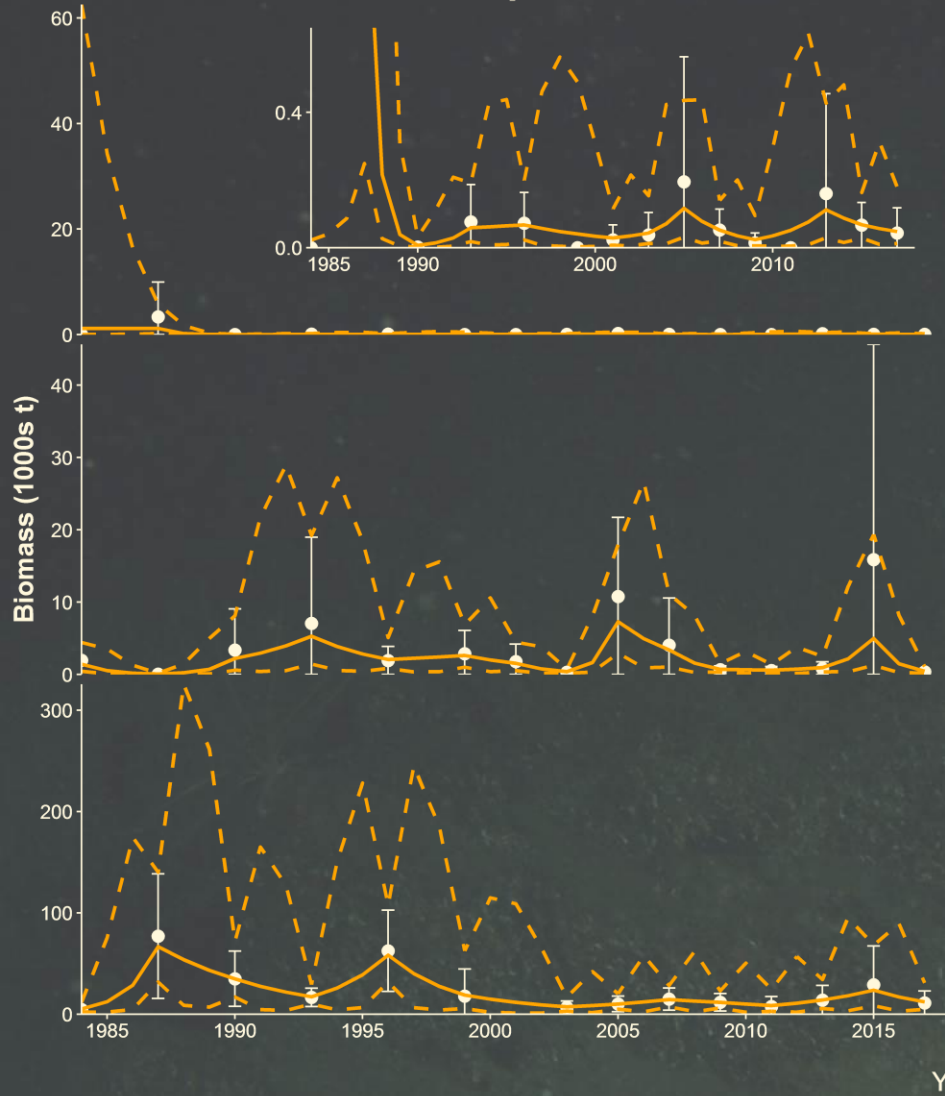
Random Effects Biomass

- Two models (all **slope sub-group** species):
 - Tier 4 sharpchin rockfish
 - Tier 5 – 17 species
- Both models run by area

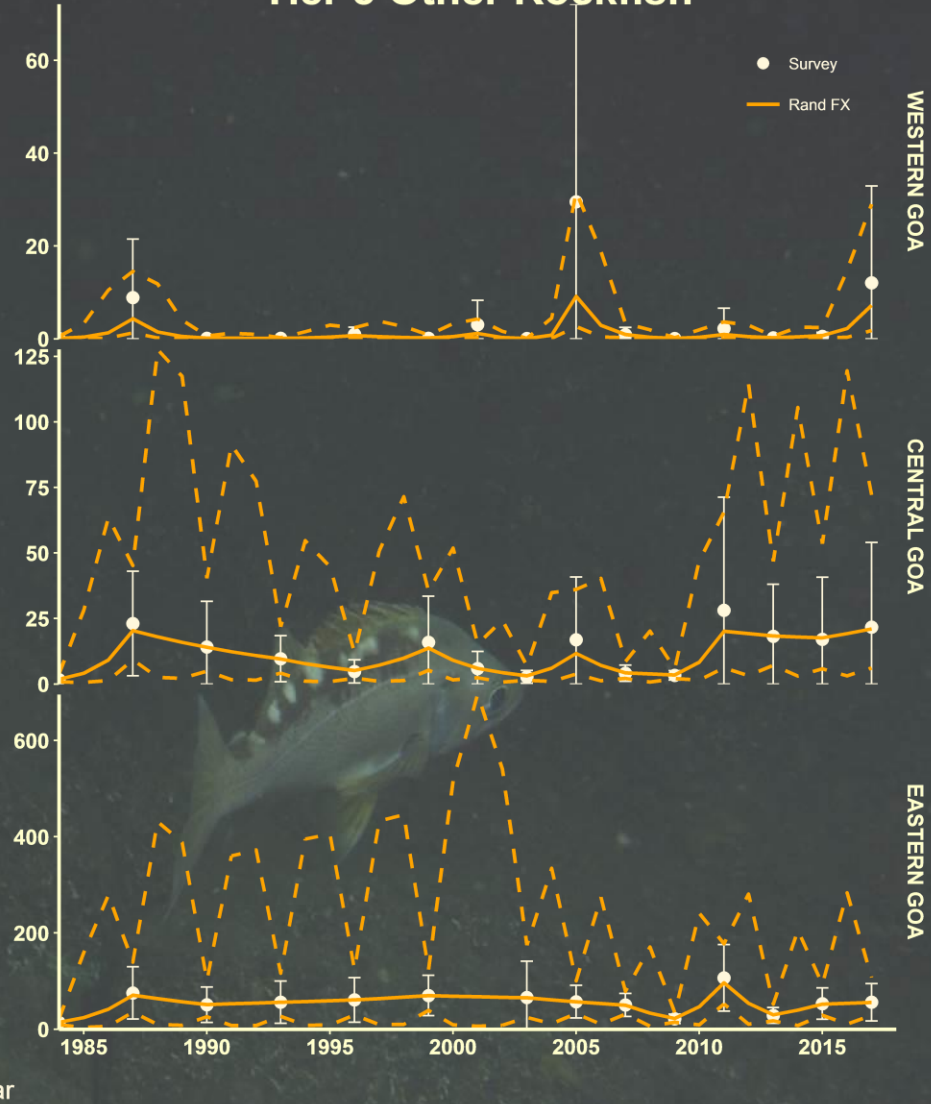


Random Effects Biomass

Sharpchin



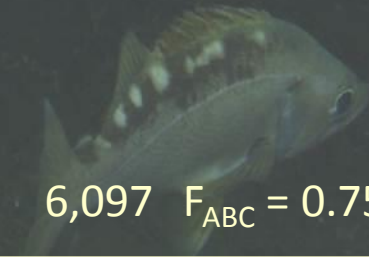
Tier 5 Other Rockfish



Harvest Recommendations

- Tier 4/5 status quo method (slope sub-group)

Group	Tier	2017 RE		OFL	F_{ABC}	ABC
		Biomass	F_{OFL}			
Sharpchin	4	12,583	$F_{35\%} = 0.079$	994	$F_{40\%} = 0.065$	818
M=0.05 Group	5	36,607				
M=0.06 Group	5	8,319				
M=0.07 Group	5	689				
M=0.092 Group	5	9,410				
M=0.1 Group	5	28,498				
Tier 5 Biomass	5	83,524	$F = Wted M = 0.073$	6,097	$F_{ABC} = 0.75 * F_{OFL}$	4,573
Total Tier 4/5 Gulf Wide				7,091		5,391



Harvest Recommendations

- PT and SSC requested evaluation of alternative Tier 6 methods (**demersal sub-group** species).
- SSC recommended using the 2003-2016 time series
- Status quo method:
 - Maximum historical catch 2013-2014




Harvest Recommendations

Tier 6 options		Western GOA	Central GOA	West Yakutat	Total Tier 6 ABC	Total Tier 6 OFL
2003-2016	Max	43	123	33	199	265
2013-2016 (status quo)	Max	29	117	22	168	223

- Recommend 2003 – 2016 because while the early years likely do not capture all sources of catch, they are likely an underestimate. (SSC recommendation)
- Max catch is preferred because these species are not targeted and they are patchy, thus anomalous large catches can occur, but are rare

Harvest Recommendations

Tier	2017 Random Effects Biomass	F_{OFL}	OFL	F_{ABC}	ABC
4	12,583	$F_{35\%} = 0.079$	994	$F_{40\%} = 0.065$	818
5	83,524	$F_{OFL} = \text{Wted M} = 0.073$	6,097	$F_{ABC} = 0.75 * F_{OFL}$	4,573
6			265		199
All Tiers Combined			7,356		5,590



Area Allocation

Current

Full Complex	W GOA	Central GOA	Eastern GOA		Total
			West Yakutat	E Yakutat/ Southeast	
Area ABC (t)	1,736		368	3,485	5,590
OFL (t)					7,356

Previous

Full Complex	W GOA	Central GOA	Eastern GOA		Total
			West Yakutat	E Yakutat/ Southeast	
Area ABC (t)	1,534		574	3,661	5,769
OFL (t)					7,424

Questions?



OR/DSR Species Grouping

- Proposal to move demersal sub-group into the DSR assessment and make the DSR assessment GOA-wide (old news)
- PT and SSC support proposal
- Implementation can not occur for the 2018 fishery
- SSC requested PT feedback on points



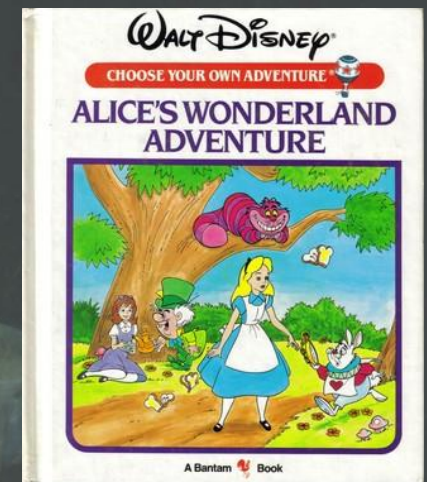
Action Item: Level of Concern

Determine level of concern

- Propose “moderate concern”:
 - Life history
 - Fishery characteristics
 - Vulnerability

Choose your own adventure slide:

- If at least moderate concern, go to next slide
- If “least concern”, full stop



Action Item: Appropriateness

Given level of concern, is proposal appropriate?

- Demersal and slope sub-groups differ substantially
- No evidence of stock structure for demersal sub-group species within GOA, thus should be assessed GOA-wide

NS1 guidelines: “Where practicable, the group of stocks should have a **similar geographic distribution, life history characteristics**, and **vulnerabilities to fishing pressure** such that the impact of management actions on the stocks is similar. The vulnerability of individual stocks should be considered when determining if a particular stock complex should be established or reorganized, or if a particular stock should be included in a complex”

Action Item: Other Measures

Are there other measures that would adequately address conservation needs?

- Other measures would mean leaving them in the OR complex
- **Demersal sub-group** ABCs within the OR complex have already been discussed and rejected
- Not appropriate to leave them in OR
 - Same species occurring in separate assessments
 - Inefficient
 - More opportunities to miss something important

Questions

- We made it this far...
- Following Spatial Management Policy, Proceed with Step 2?
 - Council identify economic and management implications
 - Identify suite of tools

Area Allocation

Tier 4	W GOA	Central GOA	Eastern GOA (96.14%)		Total
			West Yakutat	E Yakutat/ Southeast	
Area Apportionment	3.86%		8.43%	87.71%	100%
Area ABC (t)	32		69	717	818
OFL (t)					994

Tier 5	W GOA	Central GOA	Eastern GOA (66.35%)		Total
			West Yakutat	E Yakutat/ Southeast	
Area Apportionment	33.65%		5.82%	60.53%	33.65%
Area ABC (t)	1,539		266	2,768	4,573
OFL (t)					6,097

Tier 6	W GOA	Central GOA	Eastern GOA		Total
			West Yakutat	E Yakutat/ Southeast	
Area ABC (t)	166		33	0	199
OFL (t)					265

Full Complex	W GOA	Central GOA	Eastern GOA		Total
			West Yakutat	E Yakutat/ Southeast	
Area ABC (t)	1,736		368	3,485	5,590
OFL (t)					7,356

GOA Other Rockfish Biomass

