



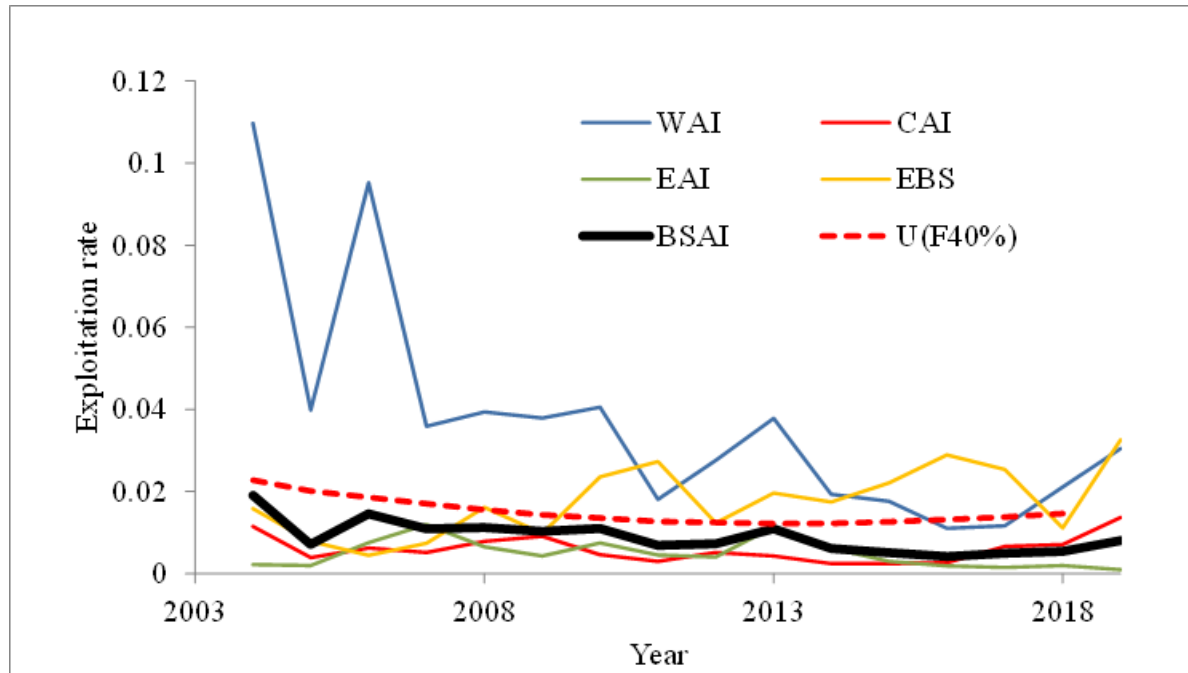
**NOAA**  
**FISHERIES**

# 2019 BSAI Blackspotted/Rougheye Rockfish (partial) assessment

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# Exploitation rates



# WAI catches have exceeded MSSC

Year	WAI MSSC	WAI catch	Catch/MSSC
2015	46	67	1.46
2016	58	38	0.65
2017	29	34	1.17
2018	35	65	1.86
2019	37	100	2.70



# Management recommendations

	As estimated or <i>specified</i> last year for:		As estimated or <i>recommended</i> this year for:	
	2019	2020	2020	2021
<i>M</i> (natural mortality rate)	0.032	0.032	0.032	0.032
Tier	3b	3b	3b	3b
Projected total (age 3+) biomass	46,482	49,141	49,005	51,451
Female spawning biomass (t)				
Projected	8,980	10,260	10,213	11,551
<i>B</i> <sub>100%</sub>	29,287	29,287	29,287	29,287
<i>B</i> <sub>40%</sub>	11,715	11,715	11,715	11,715
<i>B</i> <sub>35%</sub>	10,250	10,250	10,250	10,250
<i>F</i> <sub>OFL</sub>	0.036	0.042	0.042	0.047
<i>maxF</i> <sub>ABC</sub>	0.030	0.034	0.034	0.039
<i>F</i> <sub>ABC</sub>	0.030	0.034	0.034	0.039
OFL (t)	632	824	817	1046
maxABC (t)	522	682	675	866
ABC (t)	522	682	675	866
<b>Status</b>	As determined <i>last</i> year		As determined <i>this</i> year	
	2017	2018	2018	2019
Overfishing	No	n/a	No	n/a
Overfished	n/a	No	n/a	No
Approaching overfished	n/a	No	n/a	No

*Recommended 2020 ABC and OFLs (for AI portion of stock)*

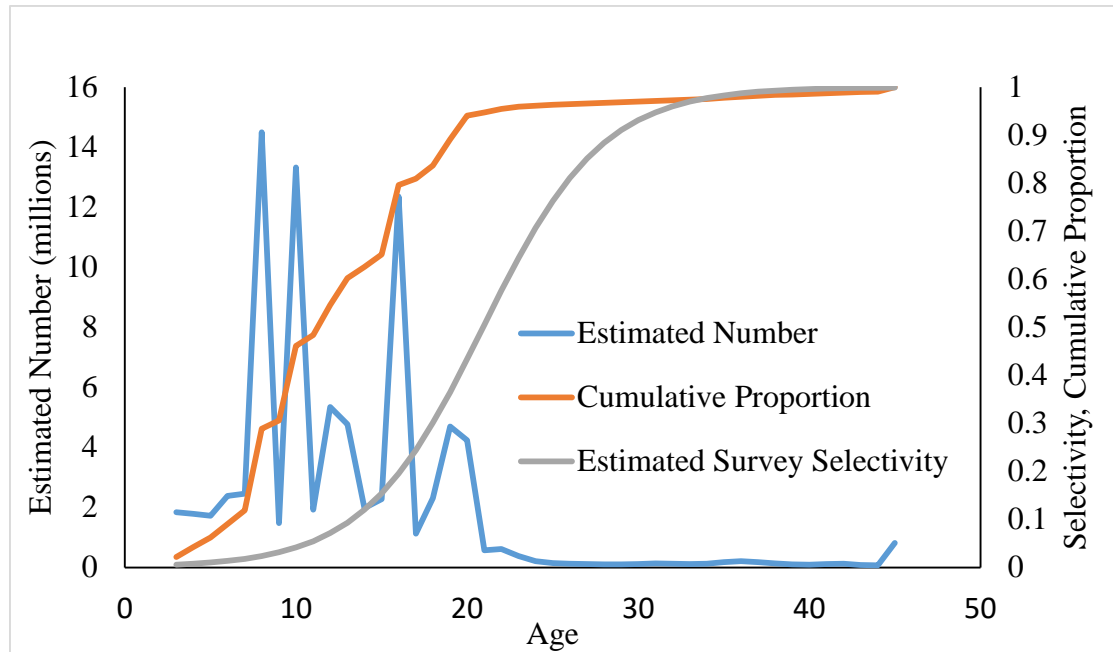
ABC: 675 t (29% increase from 2019 value of 522 t)

OFL: 817 t (29% increase from 2019 value of 632 t)

# Reason for large increase in ABC

- The model accepted for management shows a large proportion of the young fish in the population that have not been fully observed in the survey. As these young fish increase in age and grow larger, they become more selected by the fishery and the ABC increases.

# Estimated 2018 age composition



- From the 2018 presentation: *"Models that do not downweight the age and length composition data suggest the total biomass is ~ 3- 4 times the current survey biomass, and composed mostly of young fish partially selected by the survey. With the new survey biomass estimates and composition data, this seems increasingly implausible."*