

Southeast Alaska Red King Crab Stock Assessment



King and Tanner Task Force Meeting
November 27, 2023

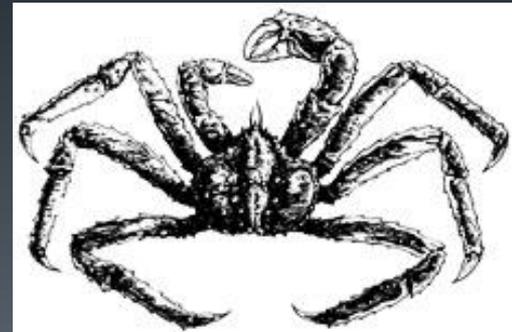


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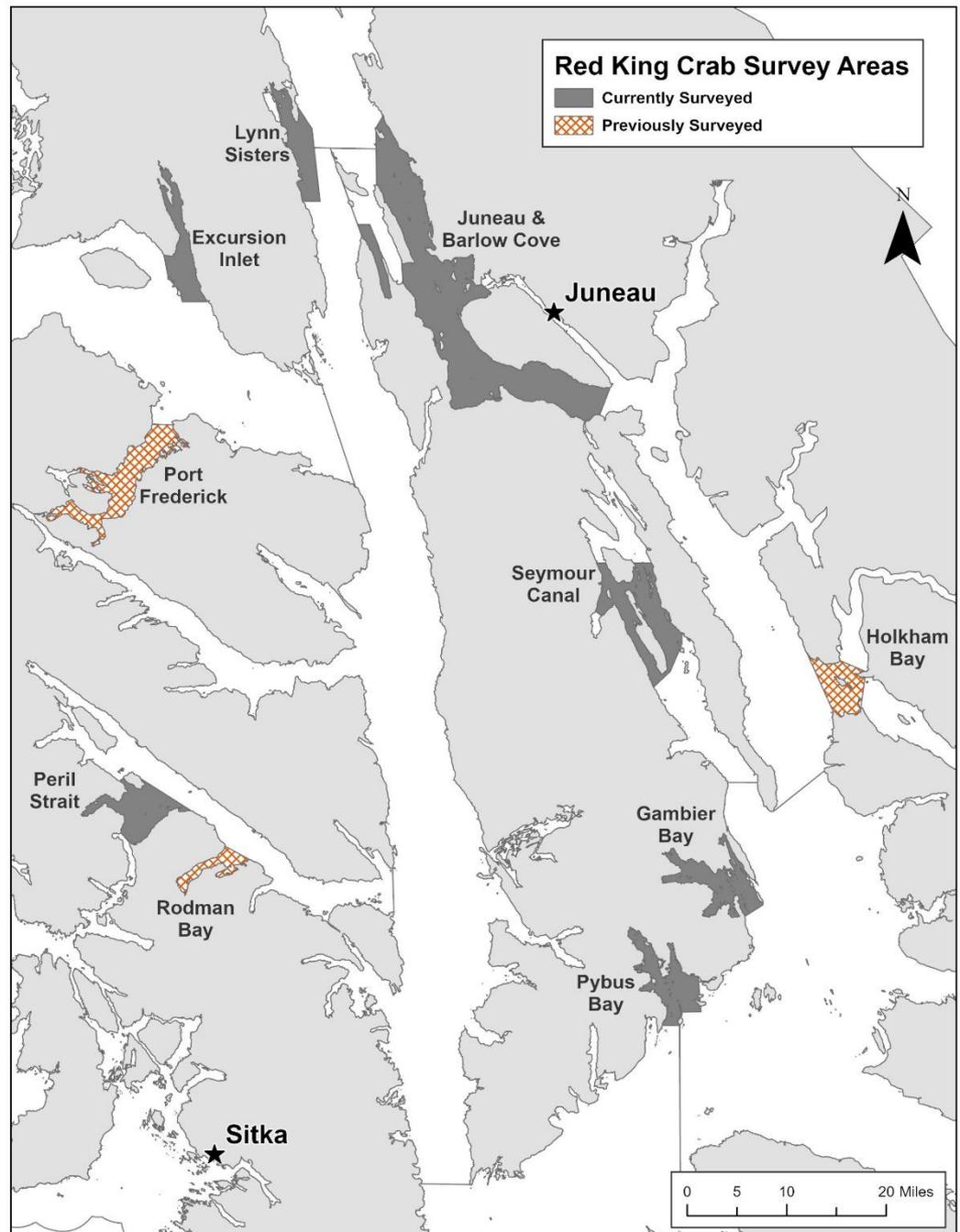
Red King Crab (RKC) Stock Assessment and Management

- Stock Assessment
 - 6 areas surveyed in 2023 with ~559 pot lifts
 - Peril Strait will now be surveyed biennially (every other year)
 - Biomass estimated using Catch-Survey Analysis (CSA) model
- Management plan
 - Commercial Fishery: November 1 – January 24
 - Appropriate harvest rate
 - Regional GHL set using survey biomass
 - Pot limits based on guideline harvest level (GHL)
 - Minimum GHL threshold of 200,000 lbs legal crab
 - Mark/Recapture expansion factor incorporated into biomass estimate
 - Males only, 7-inch minimum CW

Southeast Alaska

Current and previous survey areas for the Southeast summer crab stock assessment survey

Red King Crab Fishing Grounds



RKC Tagging Project

- Collect growth and movement of RKC.
- The tag is retained though the molt, placed in the isthmus muscle.
- Juveniles greater than 112mm, pre-recruits, and legal crab were tagged.
- Initial tagging done in two bays, Seymour Canal and Excursion Inlet.

Excursion Inlet: 864 initial tags; 2 recaptures

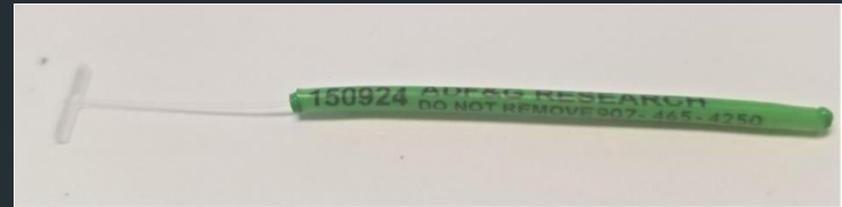
Seymour Canal: 341 initial tags

Pybus Bay: 103 initial tags

Peril Strait: 134 initial tags

Gambier Bay: 359 initial tags; 3 recaptures

Total: 1,801 initial tags



The department will continue to tag opportunistically on the survey.

The average growth per year from the recaptures is **14** millimeters.

(3 skip molted and showed no growth)

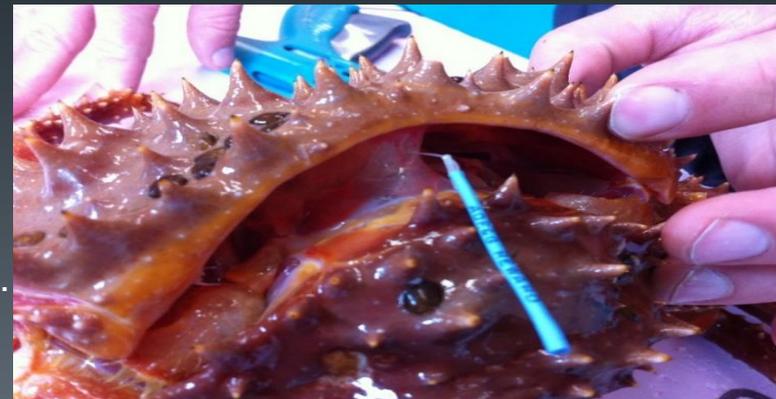
If you catch a crab with a tag:

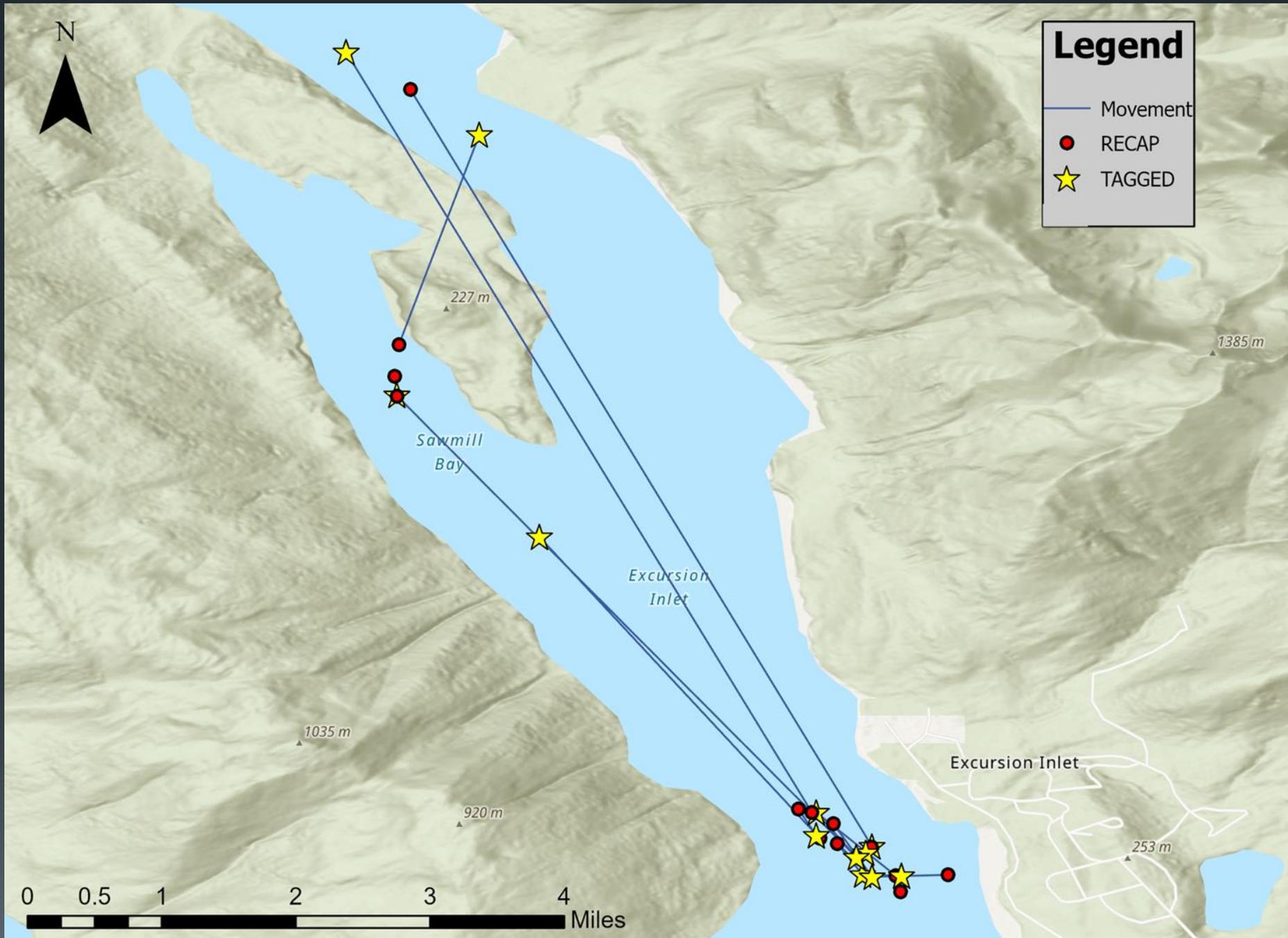
Release the crab, if it's not legal.

Report it to the department.

Record Latitude, Longitude, and tag number if you can.

There are **no rewards**.





Regional Personal Use King Crab Permits

- New permit system put into place 7/1/2018
- Permits are due June 23

Year	# of Permits	Total # of Crab
2018	1,666	1,637
2019	2,056	1,107
2020	2,690	1,260
2021	1,744	888
2022	1,728	727
2023	1,422*	240*

- Total Catch by species: 27 BKC, 94 GKC, 5,738 RKC

* As of 11/20/23. Data still being gathered

Section 11-A Personal Use Harvest (# of crab)

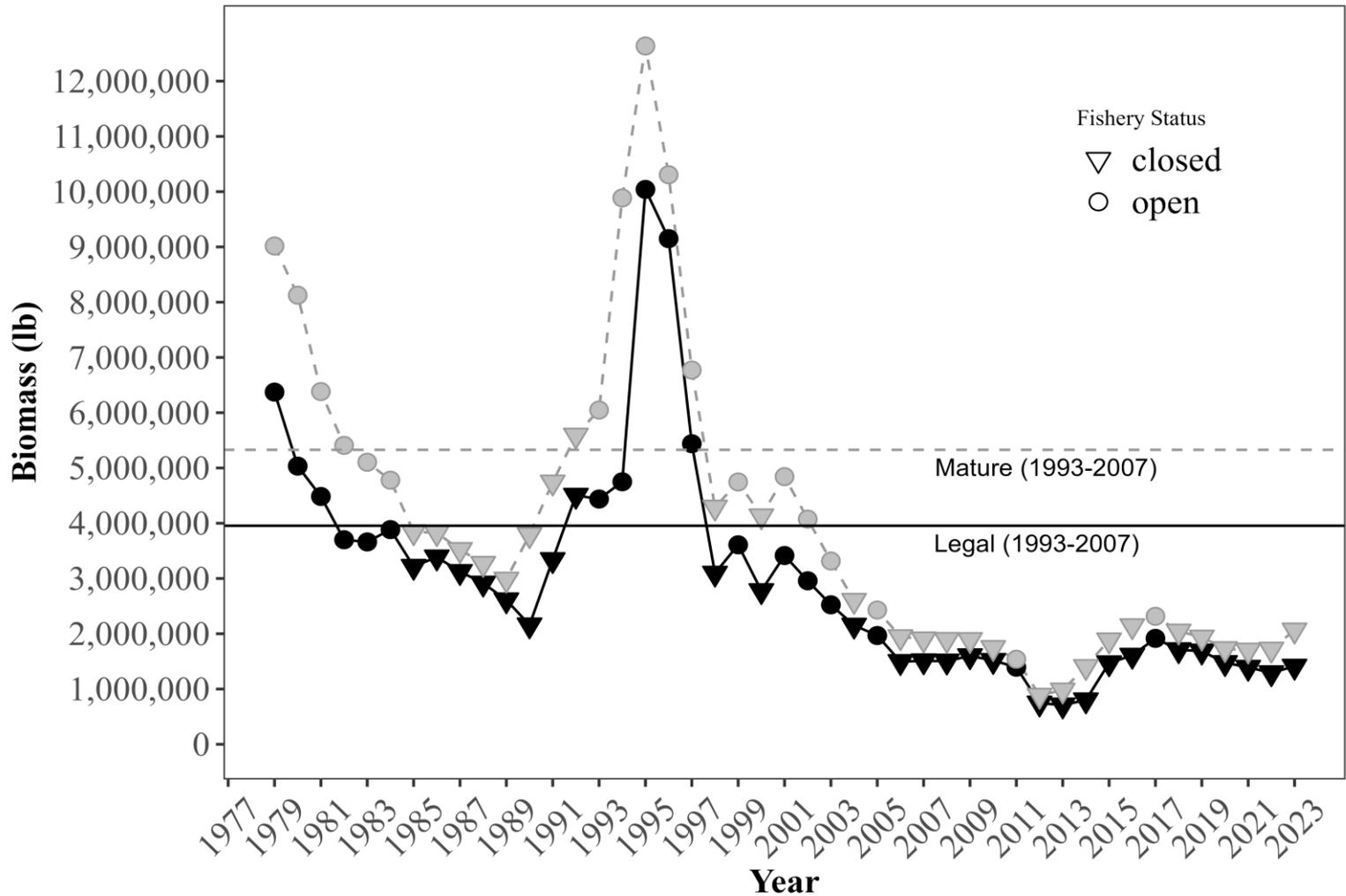


Season	Commercial (40%)		Summer personal use (50%)		Winter personal use (10%)		Total allowable harvest	
	Allocation	Harvest	Allocation	Harvest	Allocation	Harvest	Target	Harvest
2017/18	2,410	2,516	3,012	1,663	602	1,962	6,024	6,141
2018/19	0	0	2,168	1,341	434	1,138	2,602	2,483
2019/20	0	0	1,566	1,446	313	103	1,879	1,689
2020/21	0	0	1,527	1,205	305	147	1,832	1,355
2021/22	0	0	1,601	1,185	320	61	1,921	1,246
2022/23	0	0	1,364	1,211	273	232	1,637	1,443
2023/24	0	0	2,842	2,089*	568	*	3,410	*

* = Data still being gathered.

RKC Biomass

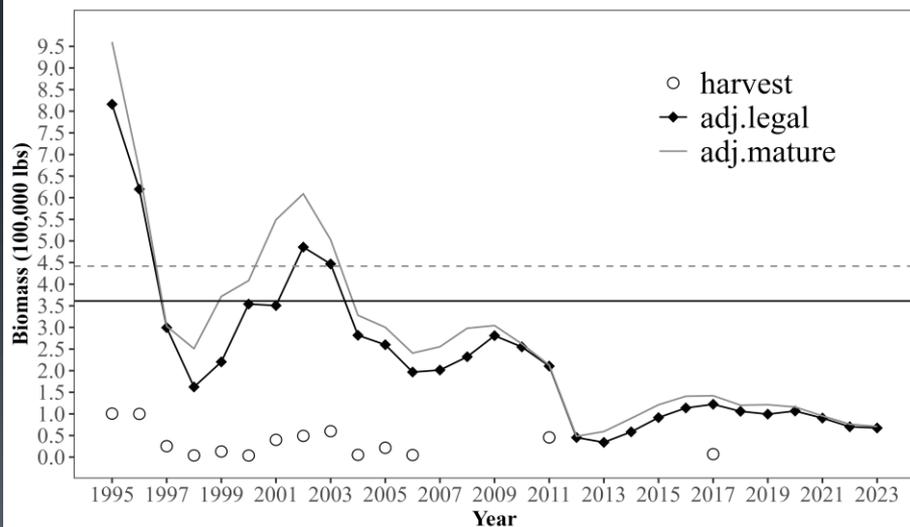
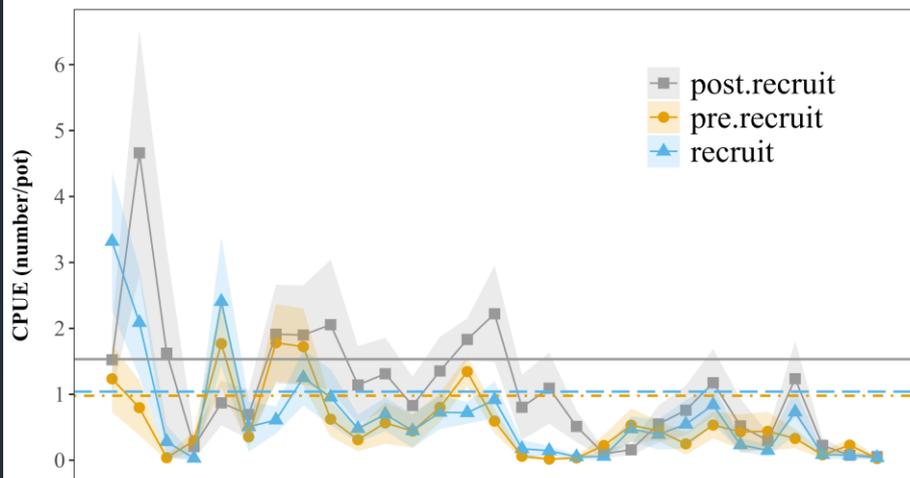
Regional biomass estimates for Southeast Alaska red king crab



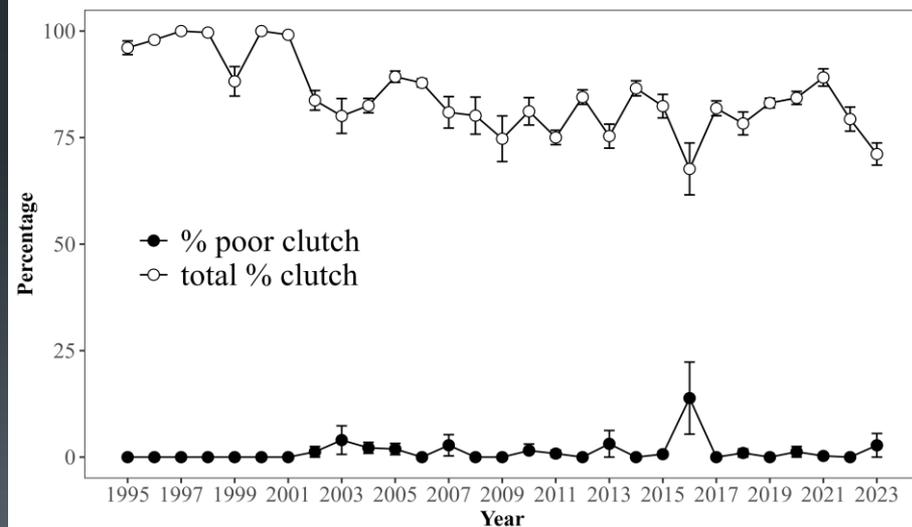
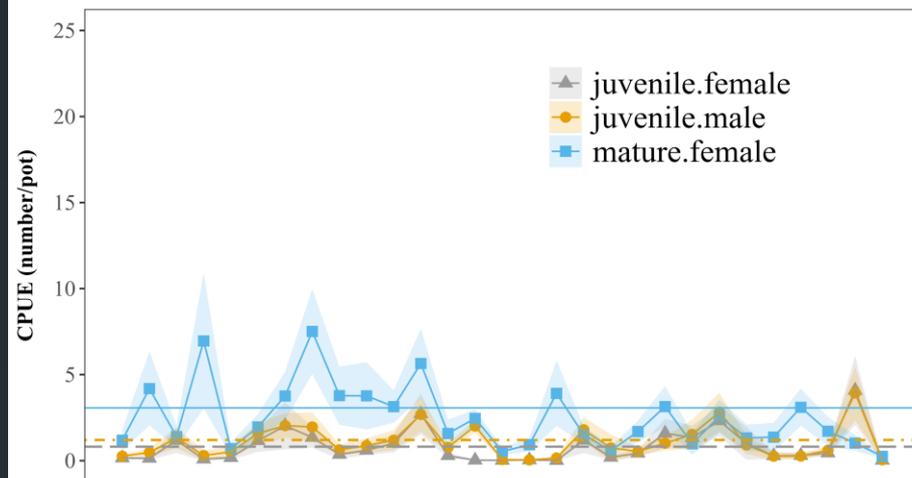
- Stock health decreased to poor status.
- All size and sex class CPUEs are below their long-term averages
- Short-term decreases in mature female, recruit, and postrecruit male CPUEs

Pybus Bay

Males

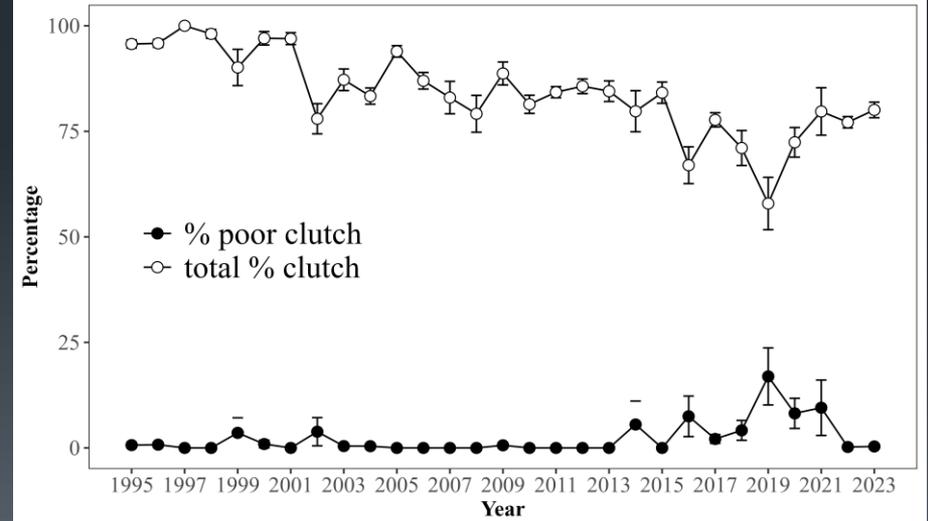
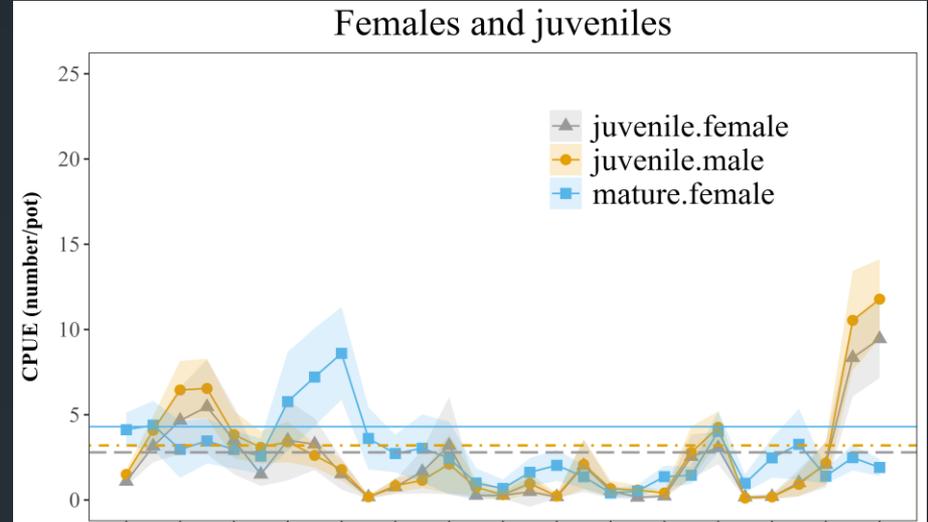
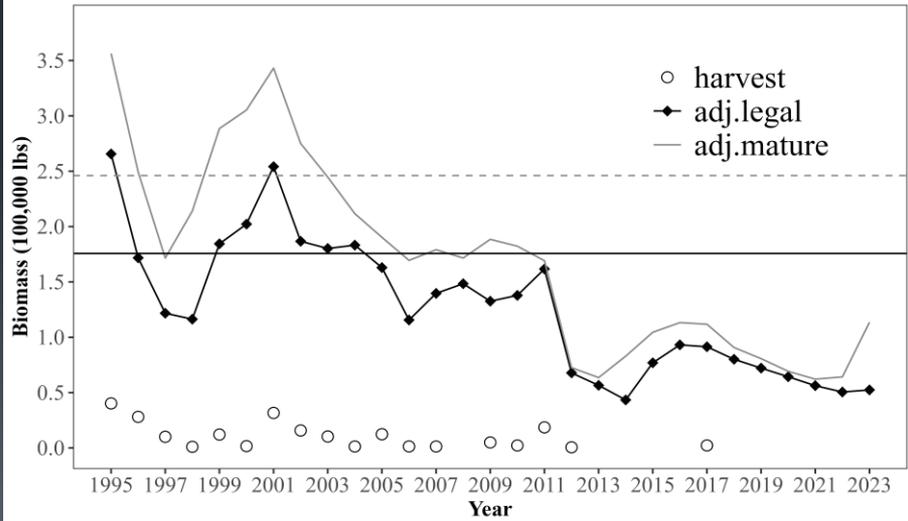
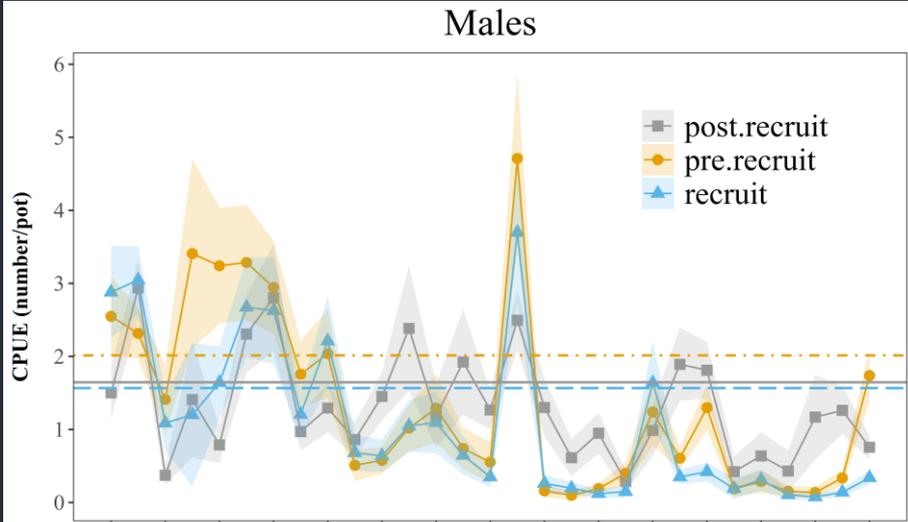


Females and juveniles



- Remained at moderate stock status
- Recruit, postrecruit, and mature female CPUEs are significantly below their long-term averages
- Significant short-term increasing trends in juvenile male, juvenile female, prerecruit, and recruit CPUEs.

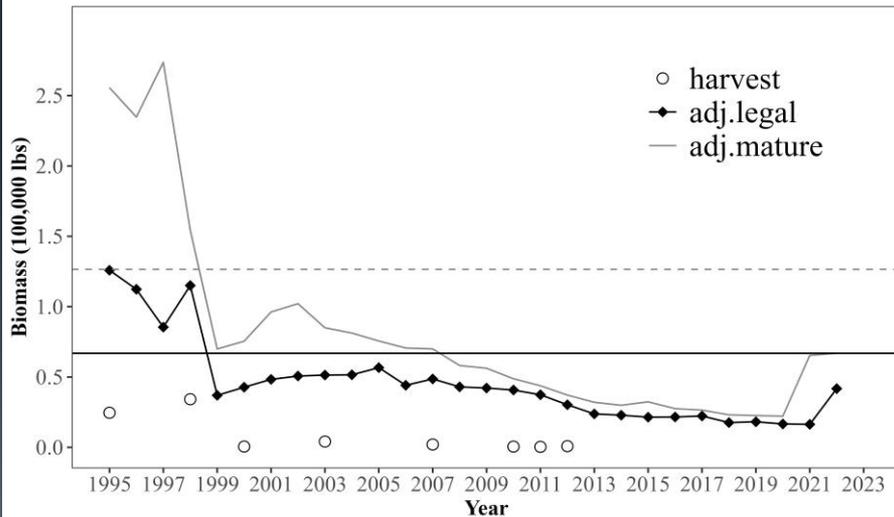
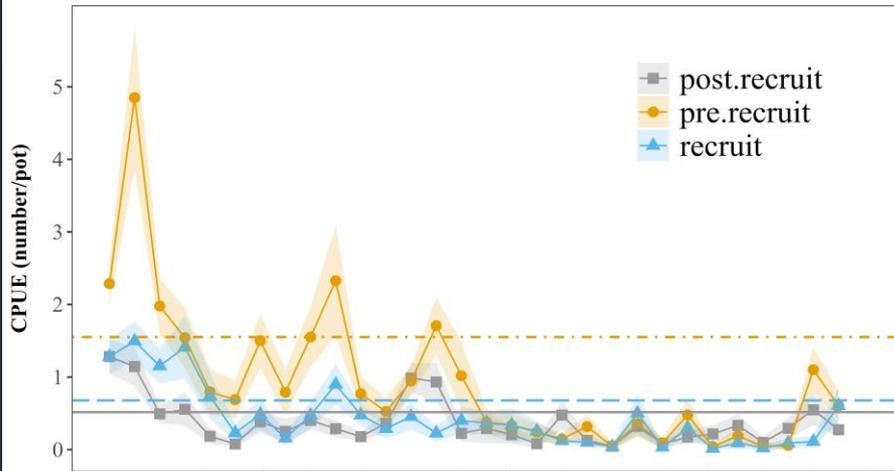
Gambier Bay



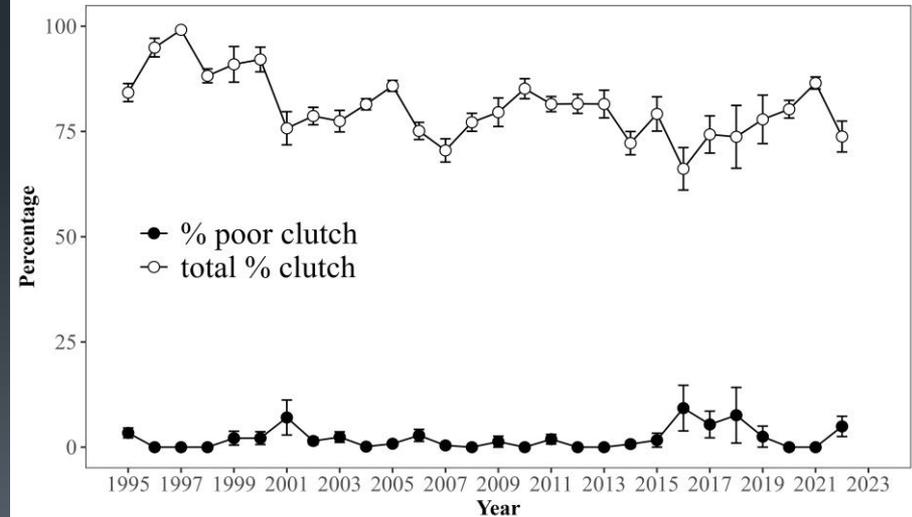
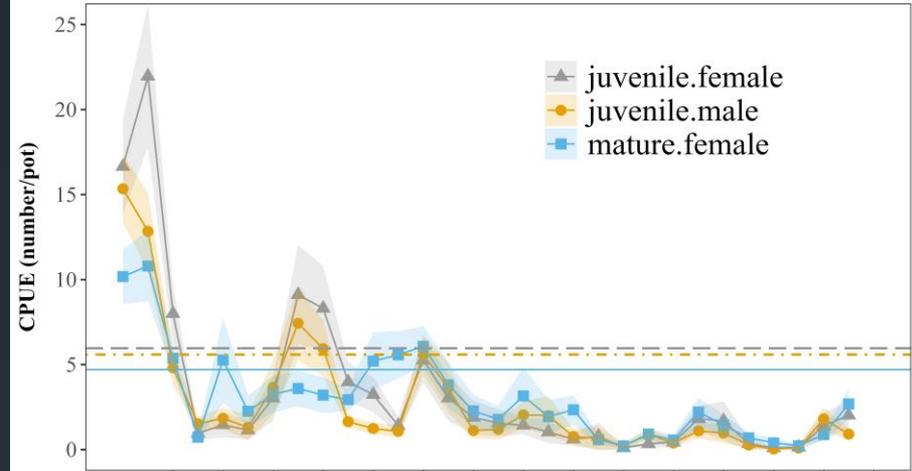
Peril Strait was not surveyed in 2023.
 The stock status in 2022 was below average.

Peril Strait

Males



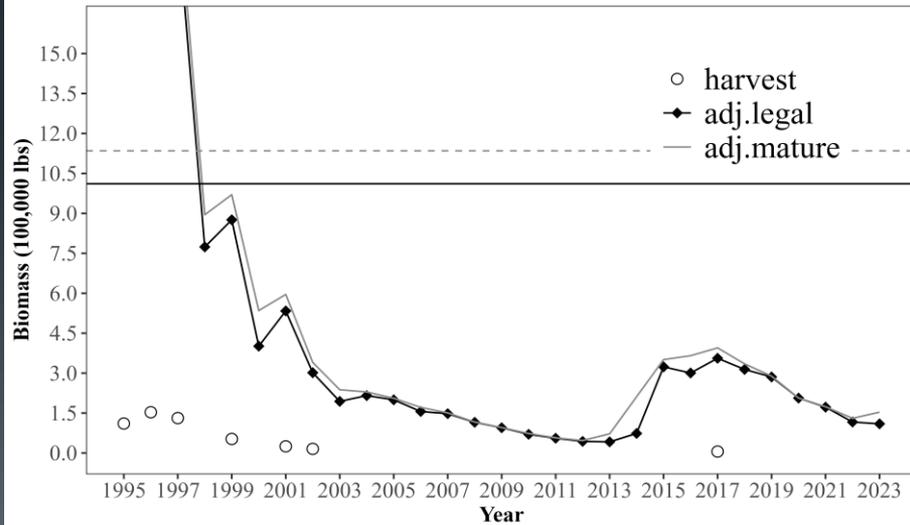
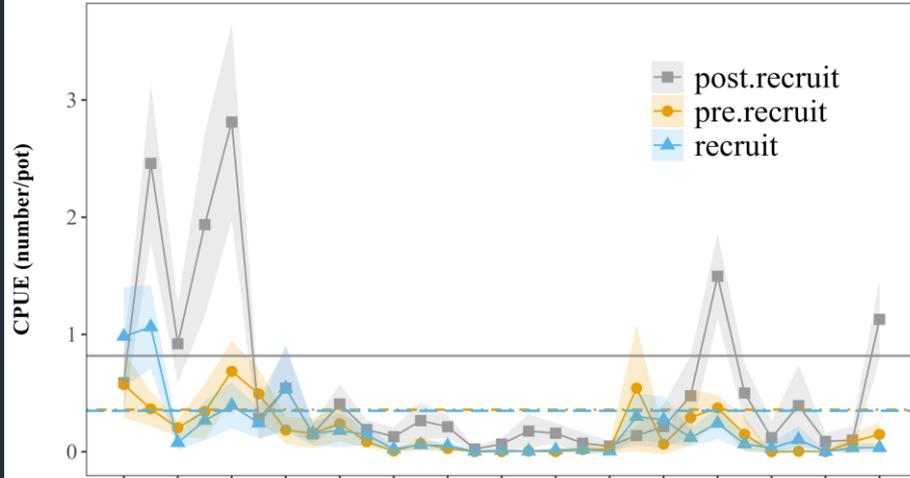
Females and juveniles



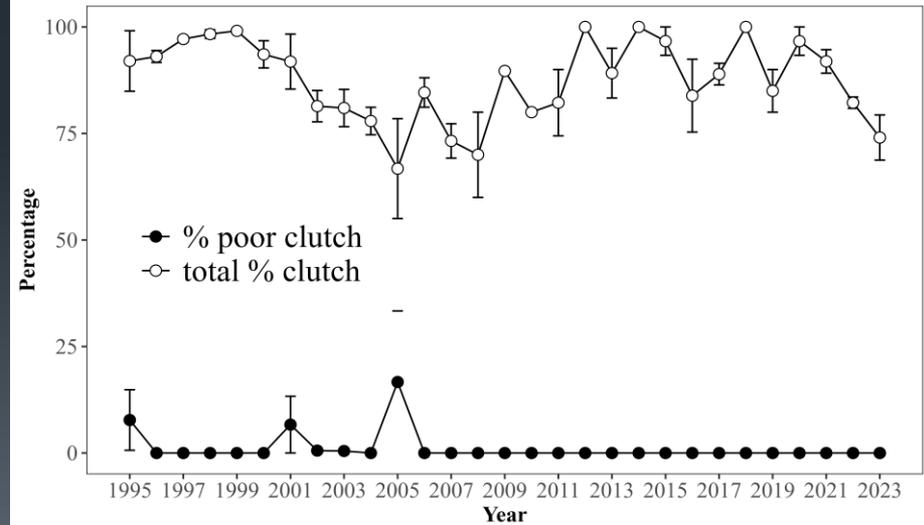
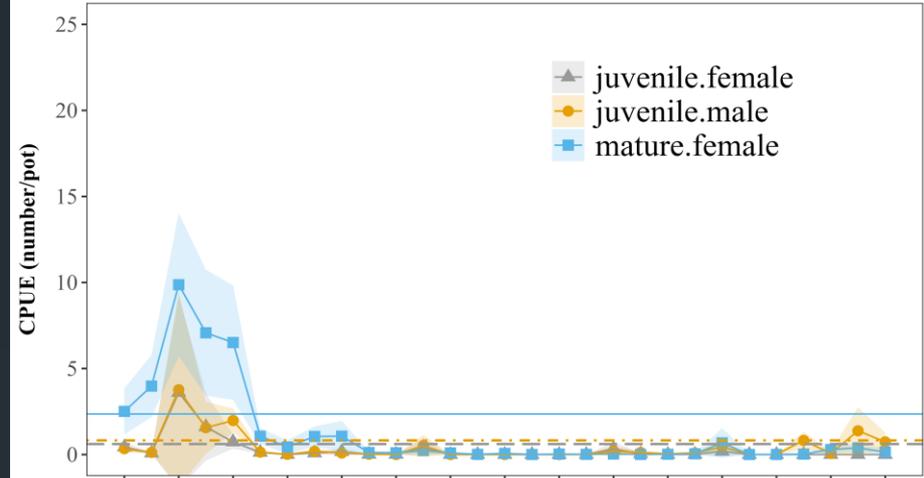
- Stock health remained below average.
- All size/sex classes, except juvenile and postrecruit males, are below their long-term averages

Seymour Canal

Males



Females and juveniles

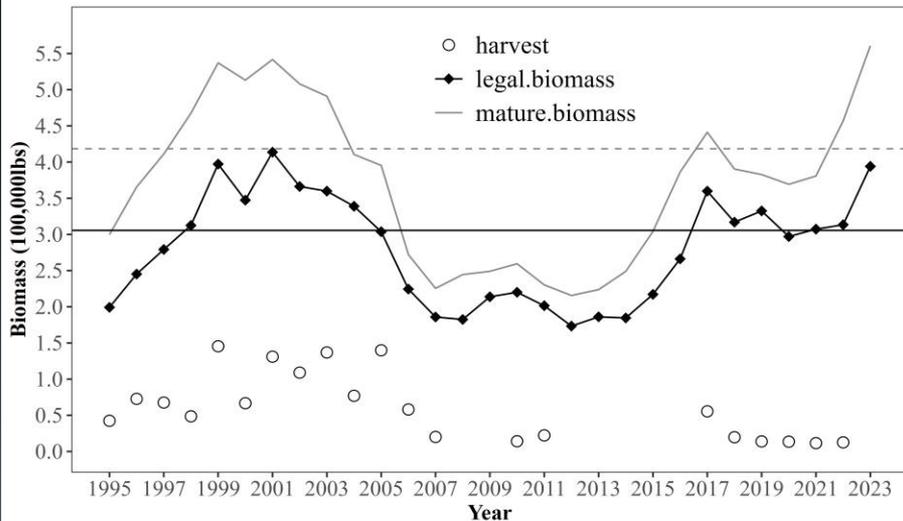
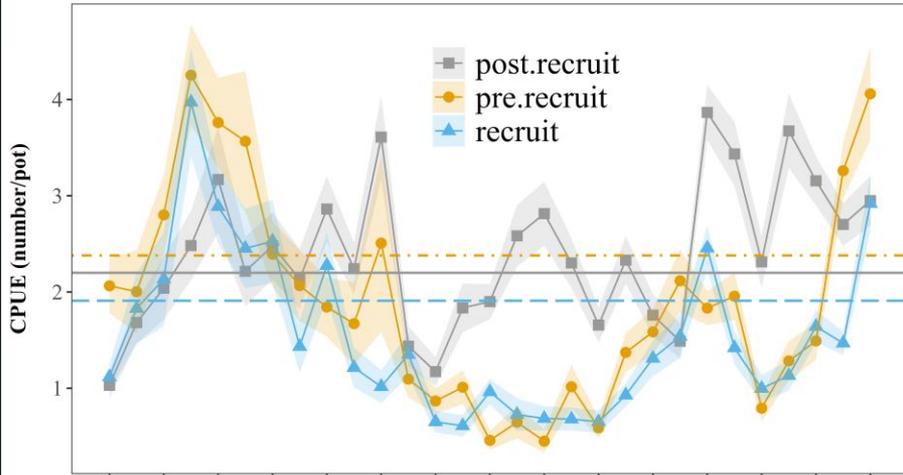


- Stock status remained healthy
- All size/sec class CPUEs are above their long-term averages
- Significant short-term increasing trends in juvenile and mature females, precruit male, and recruit male CPUEs
- Short-term decreasing trend in postrecruit male CPUE

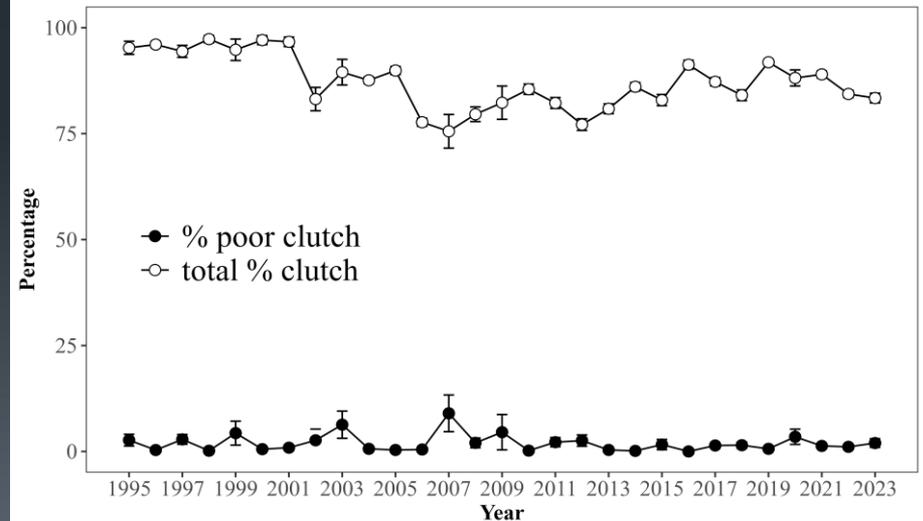
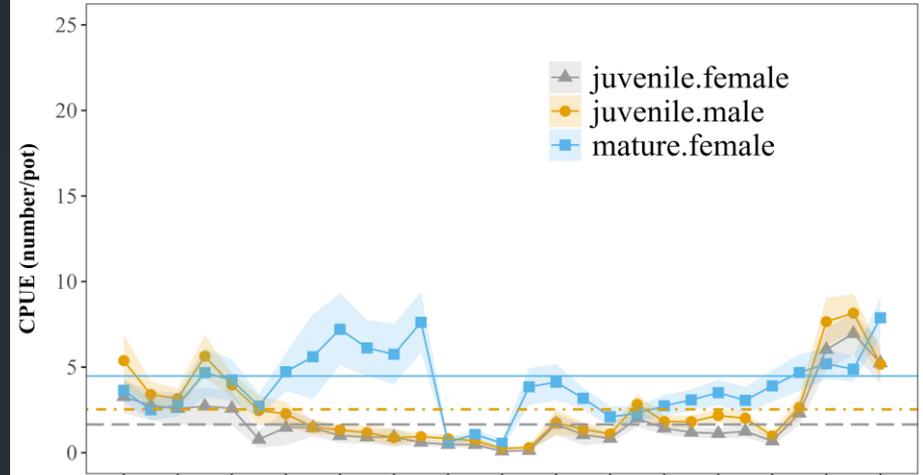
Juneau Area



Males



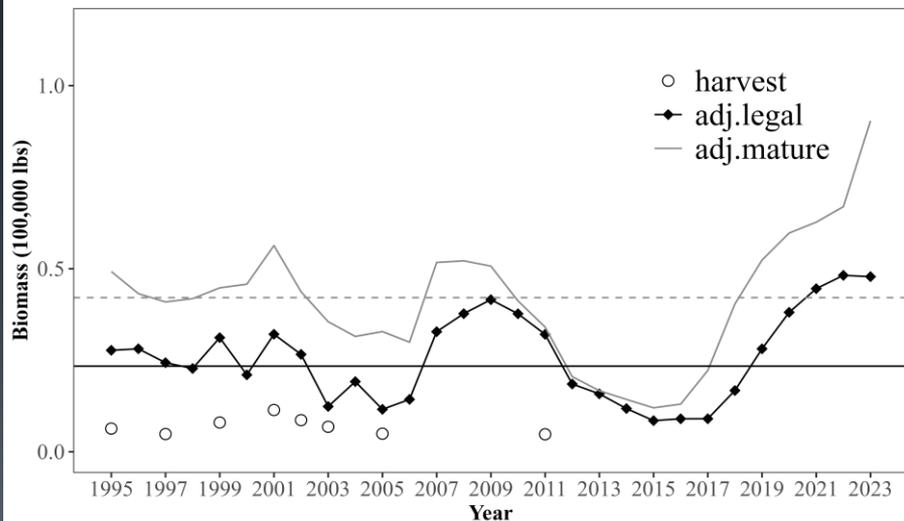
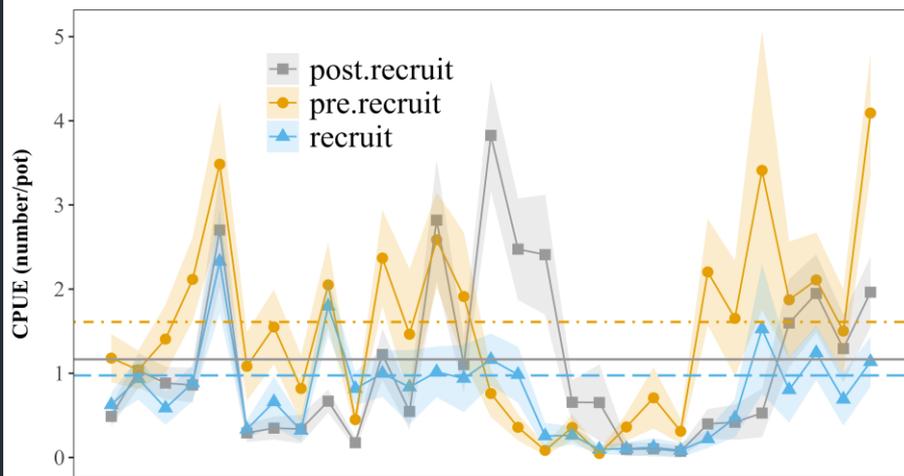
Females and juveniles



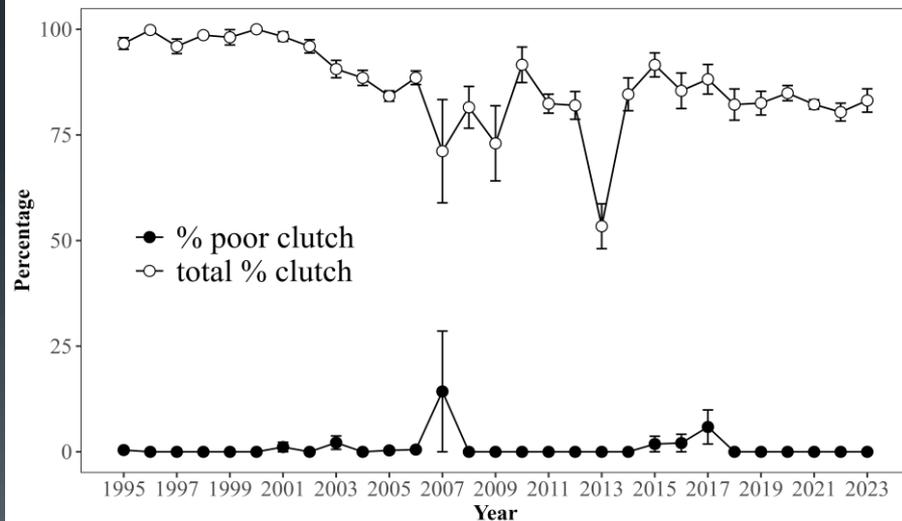
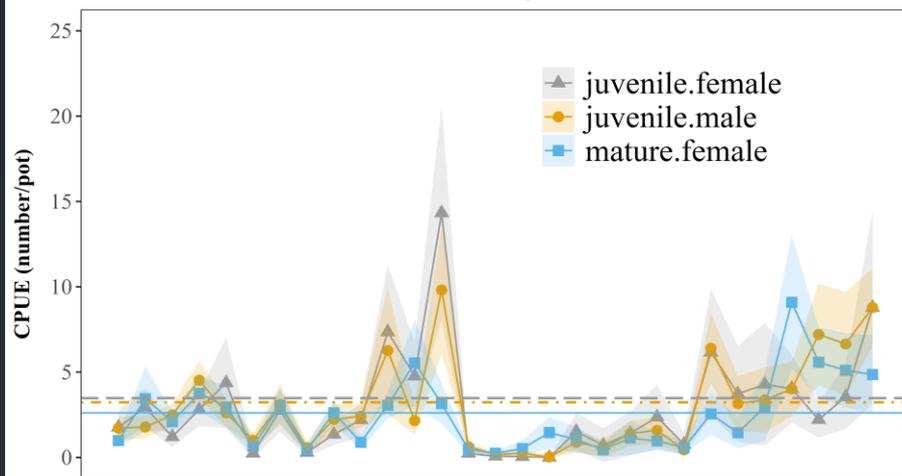
- Stock health improved to above average status
- CPUEs for juvenile and prerecruit males were above their long-term averages
- Significant short-term increase in prerecruit male CPUE

Lynn Sisters

Males



Females and juveniles

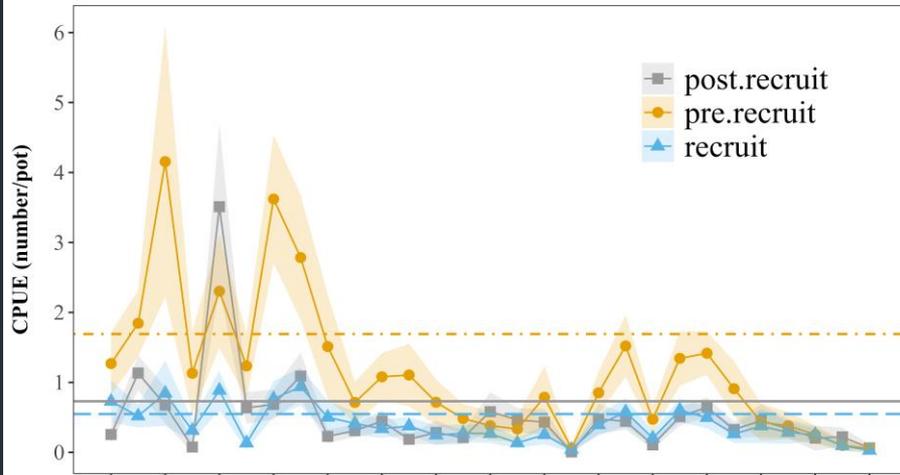


- Stock health remained poor
- CPUEs of all size/sex classes are significantly below their long-term averages
- Significant short-term decrease in juvenile female, mature female, prerecruit male, and recruit male CPUEs

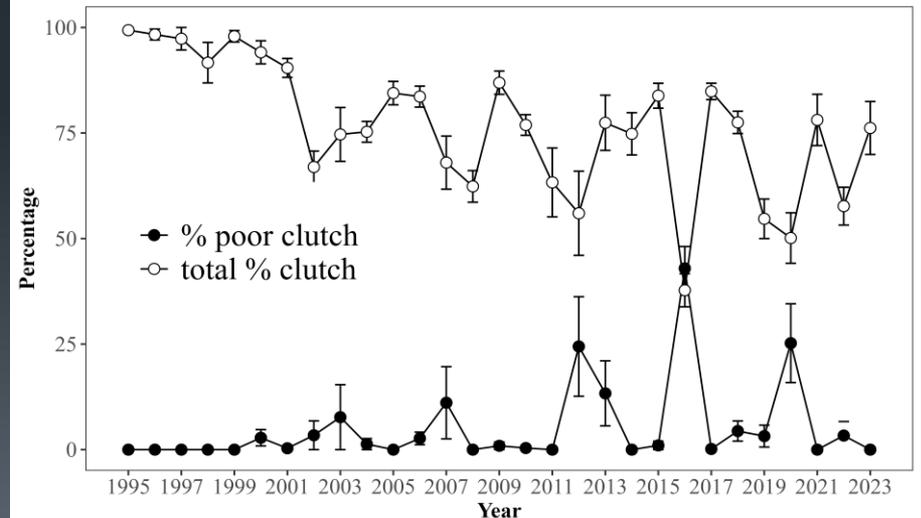
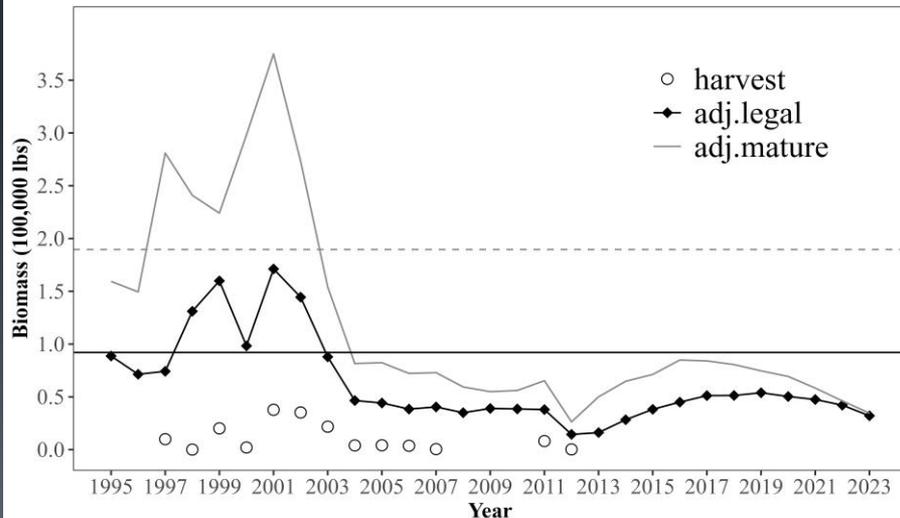
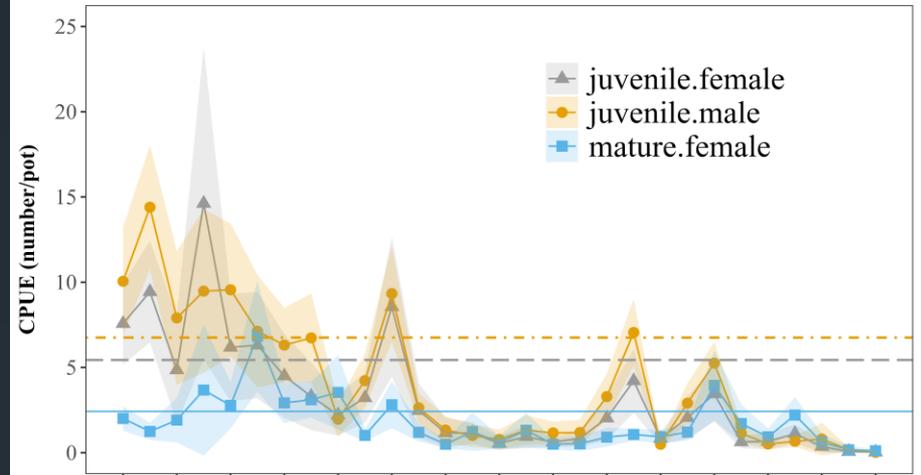
Excursion Inlet



Males



Females and juveniles



Survey area	Stock Status	Legal Biomass (adjusted)	Mature Biomass (adjusted)	Legal Harvest Rate	Total GHL (legal lb)	Personal use harvest (lb)	2023 Commercial GHL (legal lb)
Pybus Bay	Poor	67,444	70,827	0%	0	0	0
Gambier Bay	Moderate	52,418	113,490	0%	0	0	0
Seymour Canal	Below Average	109,570	153,379	0%	0	0	0
<i>Peril Strait*</i>	<i>Unsurveyed</i>	<i>41,725</i>	<i>66,943</i>	<i>0%</i>	<i>0</i>	<i>0</i>	<i>0</i>
Juneau Area	Healthy	394,048	560,707	10%	39,405	23,643	15,762
Lynn Sisters	Above Average	47,847	90,407	0%	0	0	0
Excursion Inlet	Poor	32,086	34,594	0%	0	0	0
Other Areas		666,109	974,704	15%	97,470	1,000	96,470
BKC		7,898	11,558	0%	0	0	167
Total		1,419,147	2,076,608				112,399

2023 RKC Overview

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- The 2023 commercial RKC fishery did not open due to the regional biomass below the 200,000 lb regulatory threshold
- The winter personal use fishery will occur in January 2024
- Regional legal and mature biomasses both increased in 2023
- STOCK STATUS
 - Healthy – Juneau
 - Above Average – Lynn Sisters
 - Moderate – Gambier
 - Below Average – Seymour Canal and Peril Strait (from 2022)
 - Poor – Excursion Inlet and Pybus Bay
- Gambier Bay and Juneau are the only areas with an increase in both legal and mature male biomass estimates
- Lynn Sisters and Seymour Canal both had an increase in mature but not legal biomass



Thank you!