

Southeast Alaska Red King Crab Stock Assessment

King and Tanner Task Force Mtg.

January 29th, 2016



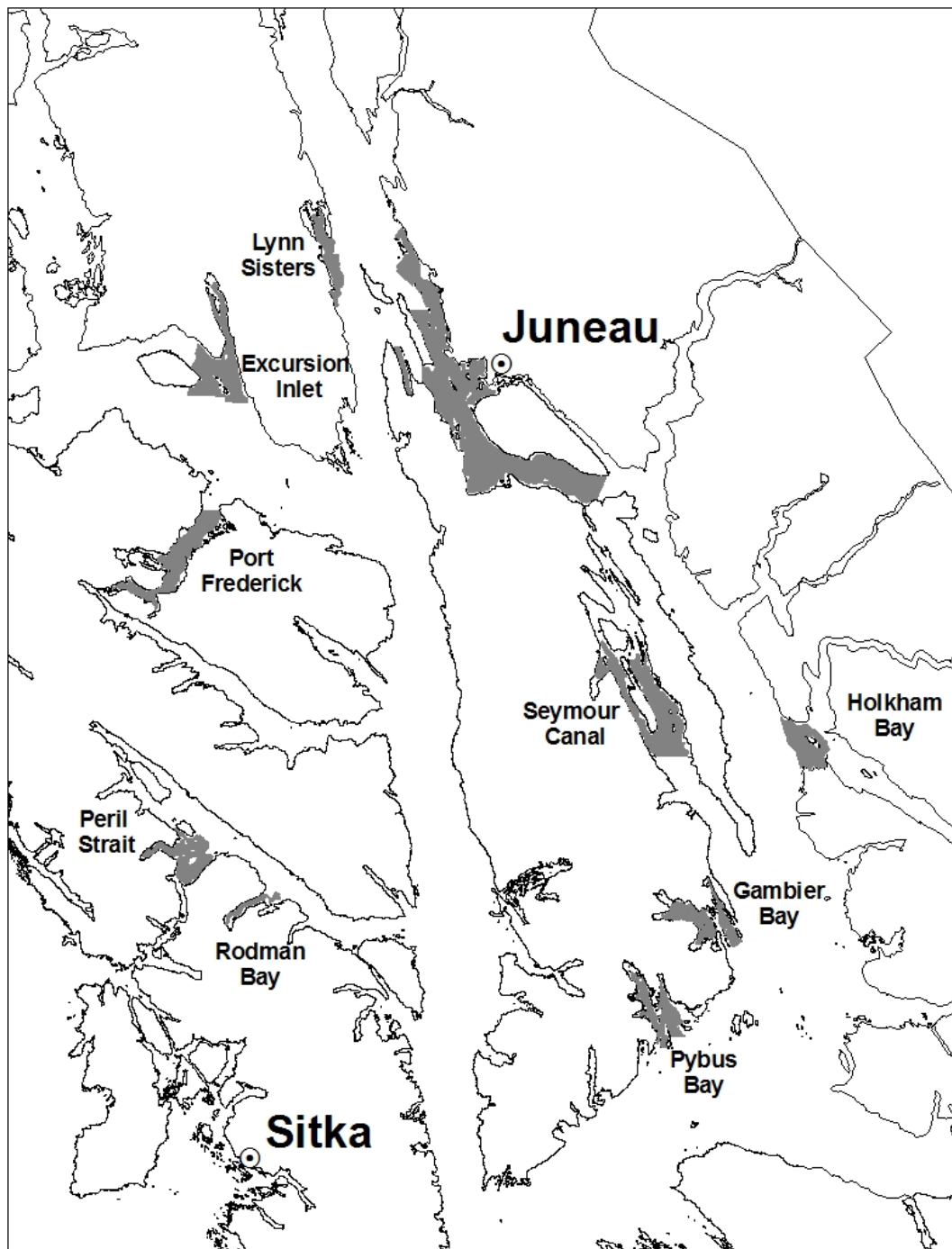
Image: northpacificseafoods.com

RKC Assessment / Management

- Assessment
 - 7 areas surveyed with ~565 pot lifts
 - Biomass estimated using Catch-Survey Analysis (CSA) model
- Management plan
 - Season November 1 – January 24
 - Appropriate harvest rate
 - Regional GHL set using survey biomass
 - Pot limits based on GHL
 - Ex. 200,000 GHL = 20 pot limit per vessel
 - 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

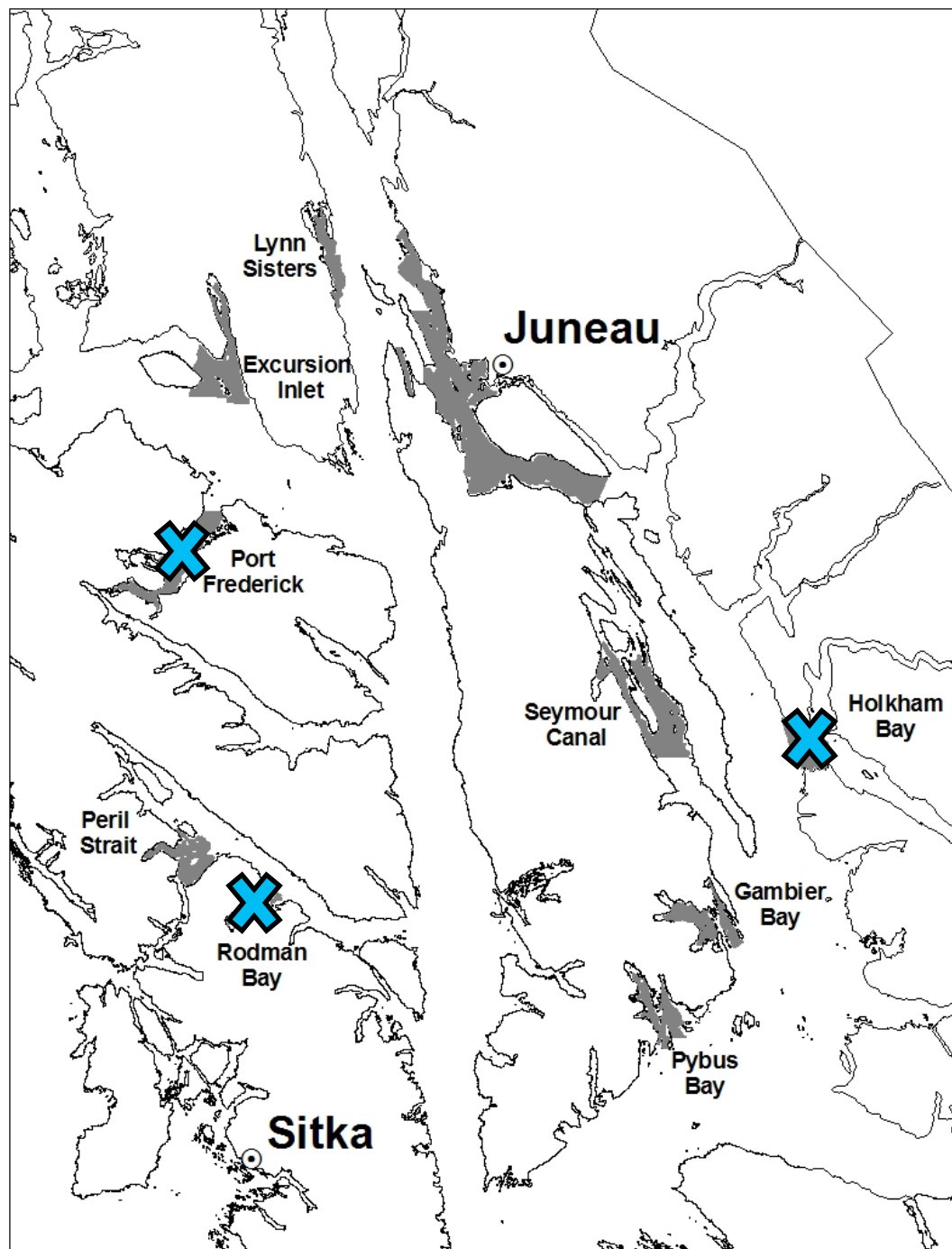
Major Commercial Red King Crab
Fishing Grounds



Southeast Alaska

2015 Survey Updates:

- Budget reductions caused survey sources to be re-allocated into historically more important survey areas
- Port Frederick, Holkham Bay, and Rodman Bay removed due to historically low catch rates and abundance
- No significant impact on biomass estimate



RKC Biomass / Harvest

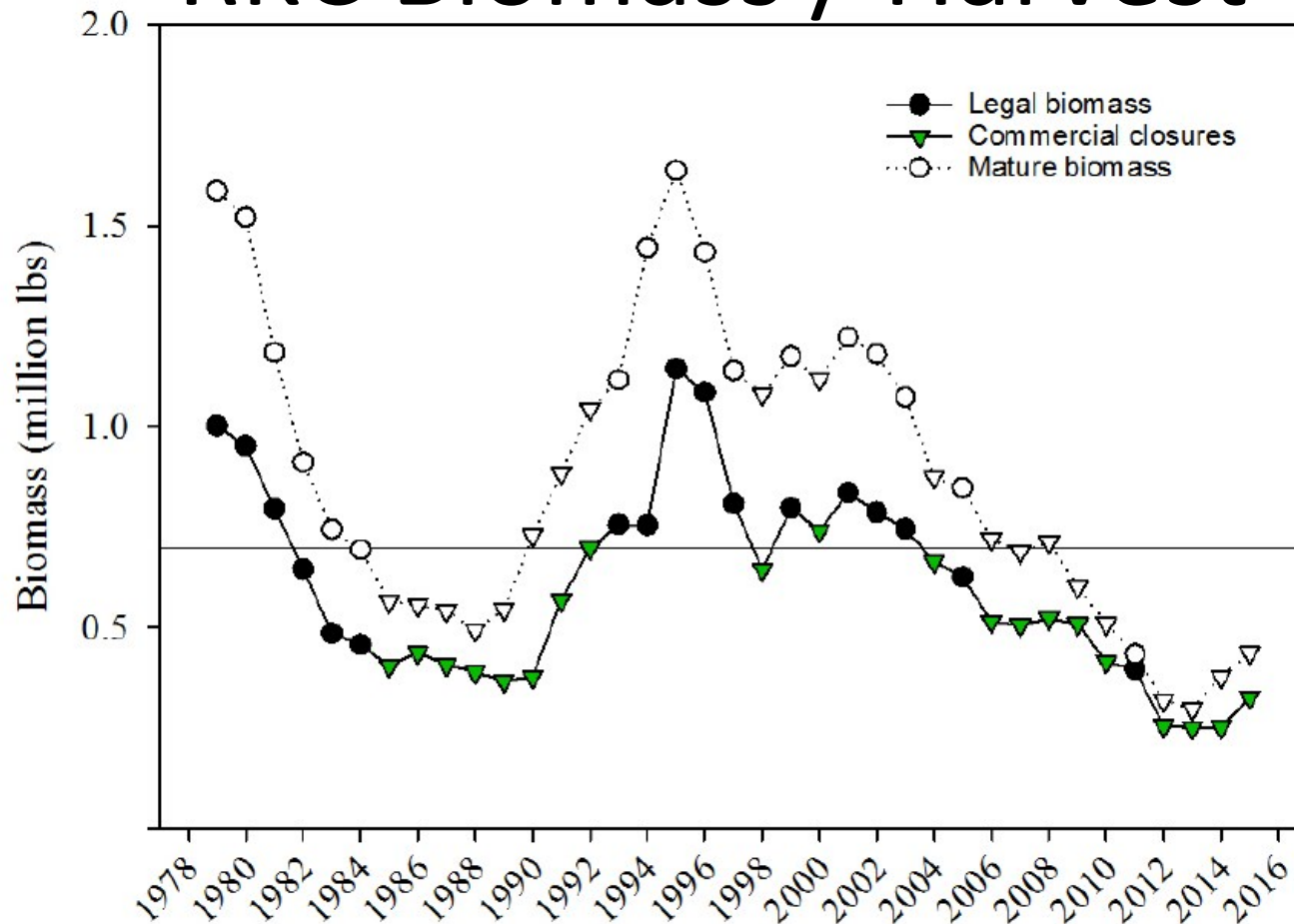


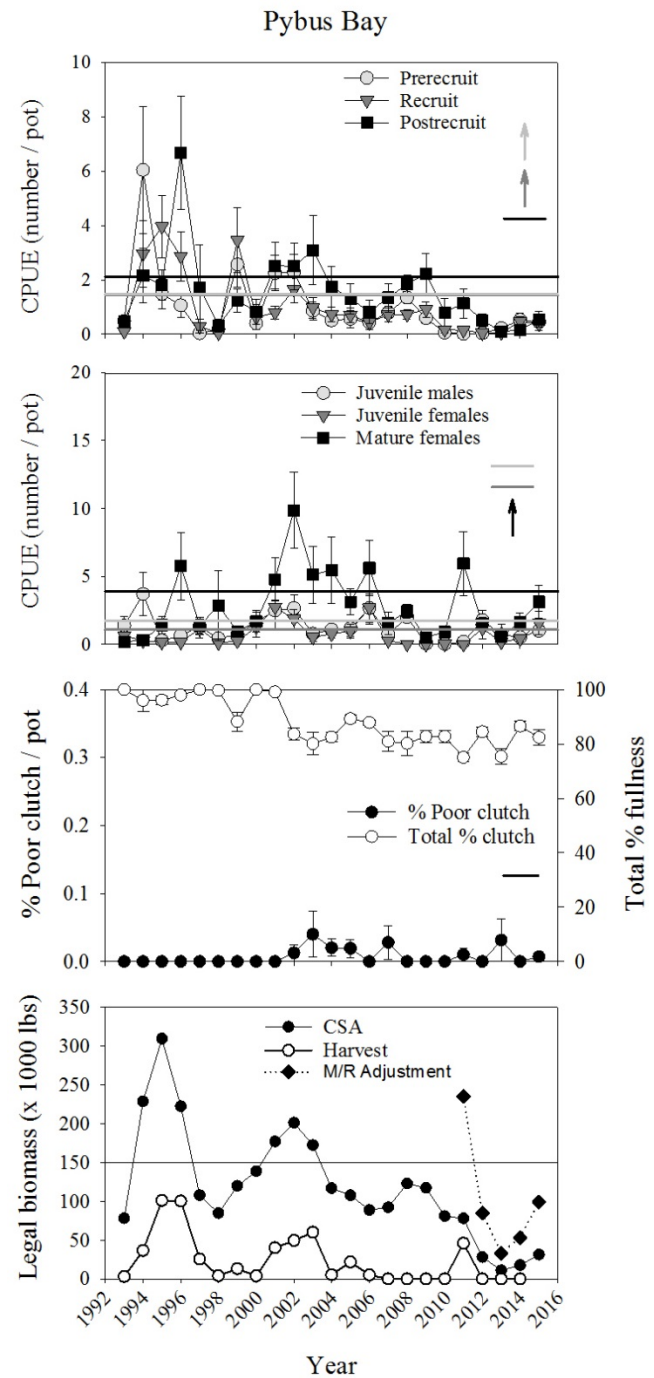
Figure 1. Total biomass estimates of mature and legal red king crab for surveyed areas in Southeast Alaska. Estimates based on Catch-Survey Analysis (CSA) methodologies. This does not include Holkham Bay or non-surveyed areas. Reference line represents long-term (1993–2007) average legal biomass estimate. Triangles represent years in which there was a commercial harvest closure.

Table 1. Summary of 2015 commercial red king crab fishery GHL calculations (in pounds) and harvest rate recommendations for the 7 surveyed areas and other areas. Adjusted Mature Biomass from NPRB M-R study are shown in bold. Note that the “Other Areas” receive an indirect adjustment as it utilizes the adjusted mature biomass in its calculation. Biomass of “Other Areas” was expanded 46.9% of surveyed areas.

Survey area	Biomass			Recommended mature harvest rate	Total GHL	Personal use catch	2015 Commercial GHL
	Biomass of legal crab	of mature crab	Adjusted mature biomass				
Pybus Bay	31,087	40,552	128,937	0.0%	0	0	0
Gambier Bay	17,591	29,013	136,469	0.0%	0	0	0
Seymour Canal	29,062	31,477	300,059	0.0%	0	0	0
Peril Strait	8,632	10,185	15,118	0.0%	0	0	0
Juneau Area	221,606	297,526	297,526	0.0%	0	0	0
Lynn Sisters	5,470	9,399	14,779	0.0%	0	0	0
Excursion Inlet	13,671	20,147	99,576	0.0%	0	0	0
Other Areas	288,924	387,123	876,583				0
Blue King Crab	3,473	4,654	10,538				0
Total	619,517	830,076	1,879,585				0

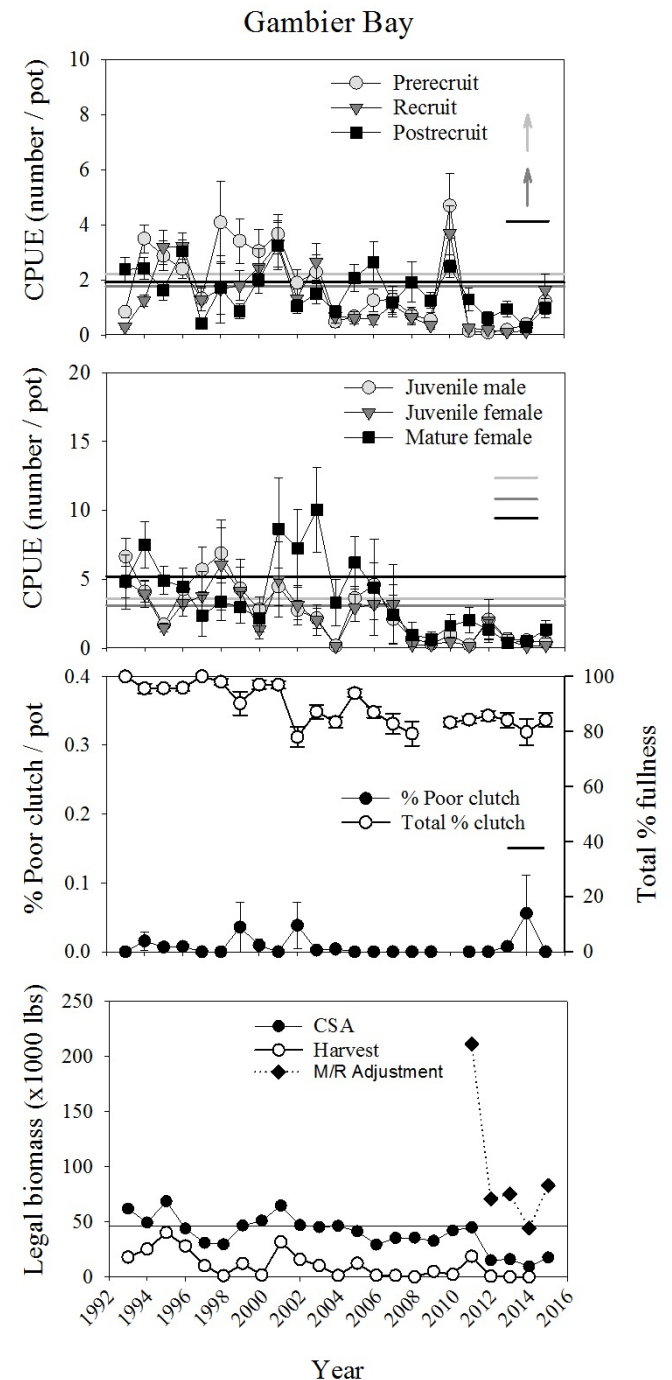
Pybus Bay

- Stock health increased from poor to moderate
- Short term increases in pre-recruit and recruit males, and mature females
- % Female clutch fullness healthy
- Both legal and mature male biomass estimates increased, but still remain low compared to historic levels



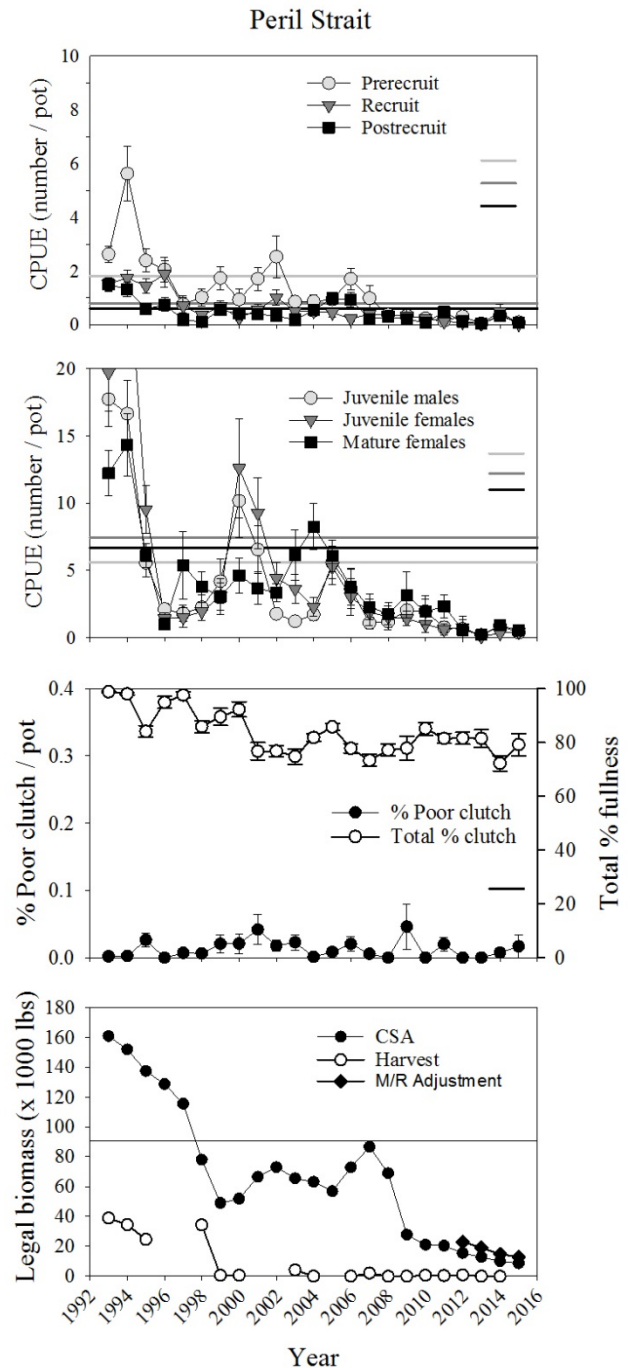
Gambier Bay

- Stock health increased from poor to below average
- Short term increases in pre-recruit and recruit males
- % Female clutch fullness healthy
- Both legal and mature male biomass estimates increased from 2014 which were the lowest biomass estimates on record



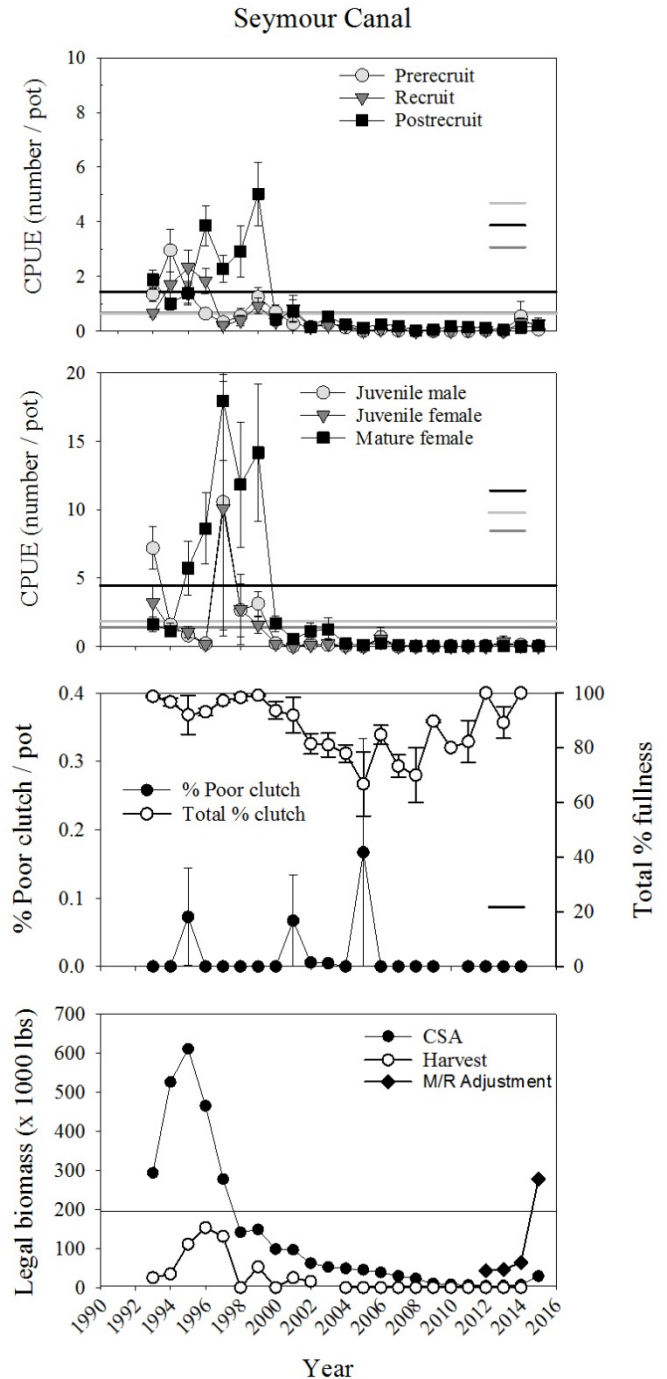
Peril Strait

- Stock health decreased from below average to poor
- No short term trends or indication of improvement for any class
- % Female clutch fullness healthy
- Biomass levels are lowest since the survey began



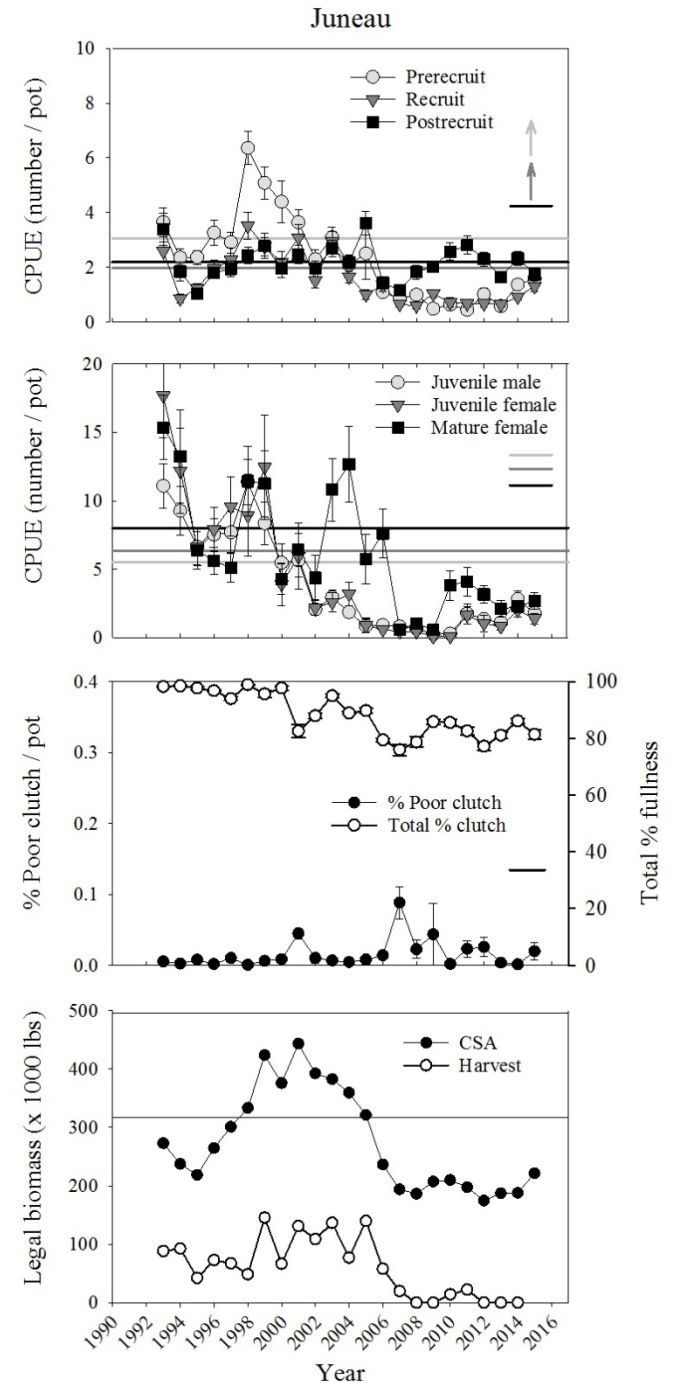
Seymour Canal

- Stock health decreased from below average to poor, however there are some signs of improvement
- Increases in male recruits and post recruits suggest potential stock improvement
- % Female clutch fullness healthy
- Biomass levels increased slightly



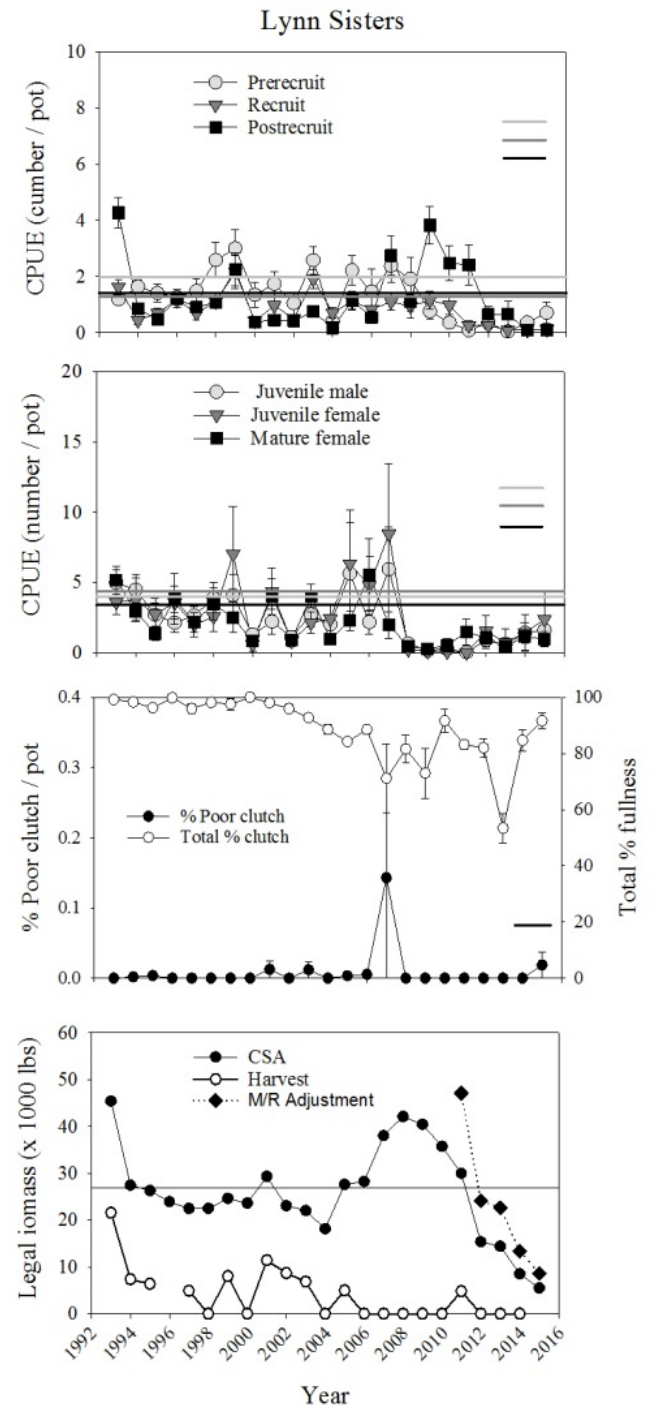
Juneau Area

- Stock health remains at below average and continues to improve
- Short term increases in male pre-recruit and recruit classes
- % Female clutch fullness healthy
- Biomass levels increased and are the largest they have been since 2006



Lynn Sisters

- Stock health improved from poor to below average
- Short term increases in male pre-recruit classes indicating potential recovery for the future
- % Female clutch fullness healthy
- Biomass levels continue to decline and stock health is of concern



Excursion Inlet

- Stock health decreased unexpectedly from moderate to poor
- Decrease most likely due to decline in juvenile male, pre-recruit males, and juvenile females
- % Female clutch fullness healthy
- Legal biomass increased slightly, but mature biomass declined substantially

